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A History of 700 and 800 Series Cantonment Construction

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WORLD WAR II AND THE U.S. ARMY MOBILIZATION PROGRAM:

A HISTORY OF 700 AND 800 SERIES CANTONMENT CONSTRUCTION

Diane Shaw Wasch
Perry Bush
Keith Landreth, et al.
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Legacy Resources Management Program
United States Department of Defense

United States Department of the Interior
National Park Service
Cultural Resources
HABS/HAER

PREFACE

World War II and The U.S. Army Mobilization Program: A History of The 700 and 800 Series Cantonment Construction was compiled as a joint effort of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Department of the Interior, Robert J. Kapsch, chief; and the Legacy Resources Management Program of the Department of the Army, Engineering and Housing Support Center, Edward T. Watling, director. The funding was provided through the Legacy Resource Management Program, under the supervision of Constance Werner Ramirez, the historic preservation officer for the Department of the Army. The project was coordinated by John Burns, deputy chief of HABS/HAER. The HABS project leader was historian Catherine C. Lavoie, who also served as an editor. Kim Hoagland, senior historian, for HABS provided consultation and served as the principal reader. Arlene R. Kriv compiled and edited the various parts of the document and also undertook the layout, assisted by Martha Wagner. The principal reader for the Department of the Army was Constance Werner Ramirez.

This publication is based on three separate yet complementary projects. The first was the writing of an overview history of the World War II Army cantonment construction program to serve as the historical context for these buildings nation-wide. The authors were HABS Historians Diane Shaw Wasch and Perry Bush, with research support from HABS architect Rusty Echols. They confined their study to Army cantonments, concentrating on the barracks--the most prevalent building type--due to the time constraints of the project. The Wasch-Bush report was written during the summer of 1988.

The documentation of Camp Edwards, Massachusetts, Part II of this report, was undertaken by Keith Landreth for the U.S. Army Construction Engineering Research Laboratory (USACERL) in 1988-89. Camp Edwards provides a case study for the 700 series Army mobilization construction, which preceded and formed the framework for the 800 series construction used at Fort McCoy. Camp Edwards was chosen for study because it was one of the first mobilization projects undertaken by the U.S. Army during World War II and, therefore, served as a proving-ground for the mobilization effort.

The overview history was written in conjunction with the documentation of Fort McCoy, Wisconsin, the records of which comprise Part III. The authors of this section, James Glass--for HABS/HAER--and Keith Landreth--for USACERL--provided a case study for the Wasch-Bush overview and incorporated findings from that report into the overview for Fort McCoy, as was the intent of the Wasch-Bush report. Martin Stupich undertook the large-format photography. Fort McCoy was chosen as a case study because it has the second largest concentration of 800 series World War II cantonment buildings extant.

The purpose, then, of this publication is to provide context and a prototype for the documentation of World War II Army cantonment construction nationwide, as a reference guide for the documentation to HABS/HAER standards of other cantonments. Part I is an overview of the mobilization construction program. The following parts are case studies of specific installations, documented to HABS/HAER standards: Part II of Camp Edwards, a base with extensive 700 series buildings, and Part III of Fort McCoy, an 800 series installation. Each of the case studies begins with an overview of the base, followed by HABS reports on a selection of structures representing the most prevalent building types, and an index to photographs, including captions (note: only select photographs listed in the indices were used to illustrate the text). Each of the HABS reports will also be accompanied by photographic copies of pertinent drawings. For this report, however, the drawings used for the construction of the buildings that were documented are included in Appendix A.

FOREWORD

Fifty Years ago, the United States undertook one of the largest domestic construction projects in the history of this country: building facilities to train men and women for military service in World War II. From a moribund depression-era construction industry rose a national effort that not only met the demands of the war, but changed forever many design and construction practices and techniques. The effect of the mobilization program can still be seen across America, particularly in the construction of residential developments.

From this construction program also came the current organization of the U.S. Army Corps of Engineers as an agency handling both civil and military projects. In order to facilitate the mobilization program, the Quartermaster Corps' Construction Division and the Corps of Engineers' Construction Division were merged and by the beginning of 1942, the construction program proceeded under the direction of the Army Corps of Engineers.

Since then, the Corps of Engineers has provided the engineering support to all Army installations for the construction and maintenance of its buildings and grounds. But never since then, has it had the challenge of World War II mobilization requirements.

Through a cooperative project with the Historic American Buildings Survey of the National Park Service to document this important engineering story, and the support of the Defense Department's Legacy Resource Management Program, this important record of the work of the former Quartermaster Corps and the current Corps of Engineers is told in the following pages. It is a reminder that through the work of many engineers came design solutions and construction methods to build every type of building and structure needed to support the Army's mission in World War II. And, it produced not only buildings but engineering procedures still supporting the military mission today.

Lieutenant General H.J. Hatch
Commander and Chief
U.S. Army Corps of Engineers

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Source: HABS/HAER.

ABOUT THE CONTRIBUTORS

Diane Shaw Wasch graduated with a Bachelor's Degree in American History from Smith College in 1982. Ms. Wasch worked for a number of years as a Hearings and Appeals Analyst for the Department of Energy before returning for her Master's Degree. She received her Master's Degree in American Studies from George Washington University in 1990. Her concentration was in American architecture and urban history. Since co-authoring the historical context of World War II Army cantonment construction for the Historic American Buildings Survey in the summer of 1989, Diane has worked for the National Trust for Historic Preservation and for the Maryland Historical Trust. She is currently pursuing a Doctorate in Architectural History at the University of California, Berkeley.

Perry Jonathan Bush graduated with a Bachelor's Degree in Political Science from the University of California, Berkeley in 1981. Mr. Bush then was employed by Habitat for Humanity, building alternative and low-income housing in Georgia's inner cities. In 1985, he began the master's program in history at Carnegie-Mellon University, Pittsburgh. Perry's concentration was in American social history. He completed his Master's Degree in 1987 and proceeded to begin the doctoral program at Carnegie-Mellon, while also student teaching. After co-authoring the historical context of World War II Army cantonment construction for the Historic American Buildings Survey in the summer of 1989, Perry returned to Carnegie-Mellon to completed his degree.

James A. Glass received a Bachelor's Degree in American History from the University of Indiana in 1975. He then worked for a number of years in the field of historic preservation planning for the City of Indianapolis. He later entered the master's program at Cornell University Ithica, New York, where he received his degree in 1984. Mr. Glass' concentration was in the history of architecture, historic preservation policy and city planning. The same year, he began the doctorate program at Cornell. He completed his doctorate in 1987, with a dissertation entitled, "The National Historic Preservation Program, 1957-69." Jim worked for the Historic American Buildings Survey for numerous summers prior to his survey of Fort McCoy during the summer of 1989, including documentation projects at Fort Riley and Fort Leavenworth, Kansas, in 1985. In 1990, Mr. Glass returned to his home state of Indiana where he is currently the deputy state historic preservation officer.

Keith Landreth has a Bachelor's Degree in American History which he received from Greenwood College, South Carolina. Mr. Landreth later received a Master's Degree in Archeology from the University of Idaho in 1986. His concentration was historical archeology. Mr. Landreth worked as an archeologist for Eastern New Mexico University, on site at the university for two years, and then on contract for the United States Army Construction Engineering Research Lab, Champaign, Illinois, for another three years. He has been a permanent employee of USACERL for the past three years.

PART I

THE HISTORICAL CONTEXT OF WORLD WAR II MOBILIZATION CONSTRUCTION

by Diane Shaw Wasch and Perry Bush

Figure 1 Fort Story, VA 1940

INTRODUCTION

In response to the German army's invasion of continental Europe, the United States quickened mobilizing for war in June 1940. Through legislation supported by President Roosevelt, Congress appropriated over a billion dollars for the construction of munitions plants, seacoast defenses, and rifle manufacturing. In addition, the monies were used to implement a program of construction that created facilities to house a new and expanded army. Before the G.I.'s could fight abroad, they had to be housed and trained in the continental United States. The building program began in earnest in the fall and, responding to current military events, rapidly surged forward. In fall 1939, the army consisted of little more than 200,000 men, a number that, while relatively small, nevertheless strained the War Department's housing capacity. By November 1944, however, the army was able to provide adequate housing for over 6 million troops in the United States alone. While a small proportion were billeted in tents, most of these troops were lodged, fed, and supplied in more than thirty thousand "temporary" wooden buildings, nearly all of them constructed in a few short years. Only 270,000 out of the total 6 million troops were lodged in buildings labeled "permanent." Altogether, by the close of the war the nation had witnessed a program of military construction which had few parallels in world history.[1]

Focusing exclusively on the immediate crisis, the army built its mobilization structures with the expectation that they would be "temporary," lasting from five to twenty years. Nearly forty-five years later, however, an army inventory in March 1985 showed that nearly 24,000 of these "temporary" World War II buildings were still standing and that a large but undetermined number were still in use. While the existence of these buildings testifies to the soundness of army construction, their condition nevertheless deteriorated in subsequent years. As maintenance costs climbed higher, it became clear to military planners that the army of the 1980s could no longer be housed either comfortably or inexpensively in 1940s army barracks. In 1983, Senate Report 97-440 called upon the army to "dispose" of its World War II temporary buildings by 1990 and replace them, according to army specifications, with "off-the-shelf pre-engineered steel frame buildings." To replace in a few short years 24,000 buildings, scattered over 159 installations in 39 states, would require a massive construction push equal to that of 1940-41. The Senate concluded that--barring a national emergency--this would remain unlikely. Even so, the army appears to have begun the task. By early February 1984, General M.R. Thurman, vice chief of staff, had approved a plan to raze over 38 million square feet of World War II-era buildings by 1990, which constituted over a third of the army's inventory of such buildings.[2]

These buildings, however, are historically important. Sheltering few celebrities, their architecture is straightforward, based on simple calculations of cost, efficiency and speed of construction. Yet for forty years, millions of American "citizen-soldiers" passed through these buildings on their way to the battlefields of Western Europe, the South Pacific, Korea, and Vietnam. These structures loom large in the memories of millions of present-day Americans, for whom military service was a central, formative experience. From the perspective of social history--which documents the historical experiences of "ordinary" individuals or "the masses"--these simple structures are as historically important as any mansion. From the perspective of architectural history, the war mobilization buildings are significant for their design, construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units, and assembly-line approach to construction were largely pioneered in the construction of these mobilization structures. They were also partially responsible for raising the building standards to include such

Figure 2 Typical mobilization camp site.

amenities as central heating, indoor plumbing and electricity. Mobilization construction also had a tremendous impact on the economy, facilitating the recovery of the building industry following the Great Depression. Thus, in order to preserve the historical heritage of World War II mobilization buildings, these structures require mitigative documentation before they are demolished.

It would be a daunting task to document 24,000 buildings scattered over the continental United States. Fortunately, because of the standardization of army construction during the war years, the general history of mobilization construction is applicable to most World War II camps and forts. Beginning in World War I, the army developed a comprehensive set of standardized building designs which could be used interchangeably in creating a camp. This "600 Series" set of drawings was the basis for subsequent army design programs. World War II mobilization construction progressively evolved from the 600 Series into the 700 Series, 800 Series, Modified Theater-of-Operations (T.O.) Series, and T.O. 700 Series. Since the T.O. variants were minimalist structures, they did not survive the postwar period. Only the 700 and 800 Series remain today. By exploring these series carefully and examining their development, we can evaluate the physical characteristics and social dimensions of World War II temporary buildings without reference to one specific site.

While the standardization of building design eases the task of individually mitigating 24,000 buildings, the large number of different building types makes it difficult to be comprehensive. For instance, in a drawing index dated January 1943, the repeatedly-revised 700 Series included plans for numerous administration buildings, bakeries, barracks, laundries, guard houses, mess halls, stables, post exchanges and motor repair shops, to name just a selection. The scope of this overview is too limited to discuss adequately all of these building types, even briefly. Instead, we will confine ourselves to just one type of structure, which can be considered the single most important structure in World War II army housing: the barrack within which the enlisted men were housed. The barrack was, and remains so today, the most prevalent structure in army camp plans. Nine thousand of the army's present-day inventory of 23,880 mobilization buildings are barracks, constituting a third of all existing buildings. Individual post buildings during World War II reflected a similar arrangement. At Massachusetts' Camp Edwards, for example, barracks composed 422 of the 1,179 buildings erected early in the war. If we are forced to identify one particular type of structure as the focus of this study, the army's basic barrack provides the most representative example of army construction during the World War II period.[3]

While focusing on the barrack type, this essay will attempt to address the following questions: Who planned and designed the mobilization structures? Why did the buildings take the shape they did? What was the military context that gave rise to their construction? What changes were made to these structures during the war years, and why? Why did one series of buildings give way to another? While answers to such questions will not satisfy the need for additional site-specific mitigation, a broad overview will provide a general historical framework for future documentation.

Figure 3 Basic barrack (700 Series), 1941.

Figure 4 Historic view of 700 Series cantonments.

OVERVIEW

THE ROOTS OF THE 700 SERIES

To begin exploring the shape and design of World War II army barracks it is necessary to begin several years before the war, and trace the development of the construction drawings in the 1930s. Originally, the army advocated the extensive use of prefabricated wooden buildings; troops or unskilled workers could erect them easily and even break them down and transport them from one place to another if necessary. In 1936, in response to the General Staff, Colonel Hugo E. Pitz of the Quartermaster Corps reported that his office was investigating steel prefabricated officers' quarters as another housing option. The appeal of prefabs was increased when the men of the Civilian Conservation Corps (CCC) were able to build them at their camps for the low cost of $160 per man. In spite of their appeal, the buildings did not meet the army's heating and space requirements, and the army was concerned that the trade unions would object to troops putting them up anyway. Yet faced with a scanty construction budget, the General Staff continued to hold out for prefabricated housing.[4] While an advisor, William Starrett, warned that such buildings would be a "disappointment, if not a disaster," the General Staff continued to toy with the prefab option into the early 1940s.

By August 1939, the Quartermaster Corps, though advertising for bids on a "modified CCC type of structure," had decided that "the CCC buildings were not entirely suitable for regular army use" and that "a two story type having better facilities . . . can be built at less cost." This still left some latitude as to what kind of two-story type would be built. As war clouds gathered in Europe, the Quartermaster Corps deliberated whether to use a two-story, "temporary" wood structure--modeled after the 700 Series--or a prefabricated, "semi-permanent" steel building. As late as November 20, 1939, the Assistant Chief of Staff argued for the "possibility of using a type of construction which will be more substantial than the wooden mobilization type now contemplated in the 700 series," and directed the Quartermaster General to prepare plans and specifications for a steel prefab structure. With the coming of the war emergency, however, economy and speed became the critical factors, ensuring that the War Department would turn to temporary wooden structures to house the new army.[5]

The roots of the 700 Series go back to 1928, when the General Staff granted permission to the Quartermaster Corps to update the World War I cantonment drawings. A few rough sketches gained G-4's approval early in 1929, but this was only a tentative beginning.[6] When Colonel Charles D. Hartman, who had served in the Construction Division of the Quartermaster Corps during the World War I, returned to head the division in 1934 he discovered that the 700 Series drawings were in poor shape, consisting only of a few tracings for barracks, mess-halls and storehouses. Though severely hampered by a lack of funds--"we had no money," Hartman recalled later--he called for a complete revision of the drawings. In 1935, the Chief of Staff ordered that a complete revision be made, using whatever funds the Construction Division could scrape together from the Works Progress Administration (WPA) appropriations.[7]

In spring 1937, an initial set of revised drawings went up to the General Staff for approval. By fall 1938, Hartman had appropriated over $250,000 in work relief funds to obtain a warehouse for his group of about eighty architects and draftsmen, and plans began to progress steadily. Yet for what purpose, no one could say exactly; for the prevailing army plan for mobilization--the Protective Mobilization Plan of 1938--envisioned little actual construction. It called for an initial force of 400,000 men, which would

Figure 5 Experimental steel barrack, Camp Grant, 1941.

subsequently be increased to 1 million within eight months of mobilization day. The troops would be housed in existing facilities and tents only for the initial mobilization. Shortly thereafter, they would be sent overseas to complete their training, thereby vacating the facilities for new troops. It was perhaps for this reason that Hartman was able to acquire only limited funds to design wooden mobilization structures, and why he ran into trouble getting many of the plans approved. How could the army justify the construction of cantonment structures when the only existing mobilization plan did not require them? As General A. Owen Seaman, who served under general of the Army Henry H. Arnold as the Quartermaster General of the Construction Division, admitted in spring 1941: "I didn't think we would ever need these cantonments." For this reason, Seaman denounced the mobilization structures as "cigar boxes" and for a while would accept no plan based on mobilization-type barracks.

Widepread isolationist sentiment in the United States also contributed to Seaman's position. Additionally, the Nye Committee's investigation of defense contracting during World War I increased anti-war attitudes among the American public. Though willing to defend U.S. borders if attacked, many Americans--not just extreme pacifists but mainstream citizens as well--viewed the lives of U.S. soldiers lost in Europe as a tragic waste and were determined to keep the country out of any future European conflict. With two wide oceans on the east and west and amiable neighbors on the north and south, many Americans had a hard time envisioning a cause for hostilities outside of Europe. Why invest much energy in planning a war mobilization effort that, twenty years after "The War To End All Wars," may never come? Seaman admitted, at a time when war once again suddenly seemed likely: "I don't think myself or anybody else

ever contemplated we would have the army that we have now. . . . Or that we would have a war."[8] Isolationist sentiment thus ran deep, even in the army.

THE EMERGENCY

The German invasion of Poland on September 1, 1939, and the consequent beginning of World War II sparked U.S. military construction. On September 8, 1939, Roosevelt proclaimed a limited national emergency. Among other measures of defense preparation, this executive order expanded the army from 210,000 to 227,000 soldiers and increased the national guard by 100,000 troops. At first, these new troops were housed in tents, but the army quickly decided to provide "temporary shelter" for them. Consequently, the 700 Series was implemented.[9] Army memos indicate that the construction division began building 700 Series barracks at various camps that fall.[10] Hartman's draftsmen could thus satisfy themselves with the limited but real utilization of their product. Throughout the winter, army command anticipated a major emergency. This expectation was underscored in early March 1940 when Chief of Staff Marshall asked Hartman how long it would take to house 2 million men. Still, the period of "phony war" following the immediate outbreak of hostilities shook few peoples' confidence in the basic viability of the Protective Mobilization Plan. With the extent of isolationist sentiment in the country and in Congress--where isolationist "irreconcilables" fought Roosevelt's war buildup tooth and nail--any further mobilization seemed impossible.[11]

Then came the German blitzkrieg in the low countries. By April 1940, German armies occupied Denmark and Norway; by the end of May, after equally rapid attacks, they had overrun Belgium and the Netherlands. France fell in June, and across the channel England prepared for an expected invasion. Acoss the Atlantic, these events galvanized both Congress and the President into action. Roosevelt requested and received two vast sums of military-designated money. First, in mid-May, Roosevelt asked that additional $732 million be added to the Military Appropriations Bill for fiscal year 1941. The funds would cover increased war production and the expansion of the regular army to 280,000 men. The bill shot through Congress for Roosevelt's signature in mid-June, with over $133 million earmarked for construction. Referring to the "almost incredible events of the past two weeks," Roosevelt went back to Congress on May 31 with another request for "over a billion dollars." Signed into law on June 26, this "First Supplemental National Defense Appropriation Act for 1941" increased army strength again--to 375,000 men--and made an additional $84 million available for construction, including funds to house the new troops. The events of the ensuing months would reveal that this was only the beginning. While the Protective Mobilization Plan ostensibly continued as the plan under which the army mobilized, in terms of housing construction, it was effectively ignored as the nation moved irrevocably down the path towards war. By fall 1940, the Construction Division of the Quartermaster Corps was fully immersed in war mobilization construction.[12]

THE CONTEXT FOR THE PLANS

The nature of the new emergency and the novelty of peacetime war mobilization shocked the American public in spring and summer 1940. "You never conceived that the Congress would authorize peacetime mobilization," Senator Ralph O. Brewster from Maine told Lt. Col. Francis J. Wilson of G-4 in the Truman Committee Hearings. He stated that ". . . Congress apparently fooled the War Department in that

respect. And I will agree that a record of 150 years possibly justified your conclusions." For throughout American history, beginning with Washington's famous farewell address warning against standing armies, Americans have studiously avoided large armies in times of peace. Only when war had come did the country mobilize and the troops were always mustered out soon after the hostilities were over. The novelty of peacetime military mobilization of an army was particularly significant for the Construction Division of the Quartermaster Corps. With the country at an uneasy peace, such sudden mobilization had profound ramifications for camp construction and barracks design. And as stated earlier, the Protective Mobilization Plan had not envisioned a war mobilization program with large-scale construction of army housing beyond the level of tents and mess facilities.[13]

With German armies on the English Channel, the housing expectations of the Protective Mobilization Plan had to be totally reevaluated. For suddenly, the European option was no longer viable. With France gone, England had major problems housing soldiers from several European countries in addition to their own soldiers. Thus, there was little room to train American troops. Thus, unexpectedly, the War Department faced a new situation that required a new type of barrack. For the first time, it had to accomodate a huge standing army that would remain in the domestic U.S. for an indefinite period. According to Lt. General Edmund B. Gregory, the new Quartermaster General in 1940, army command had a hard time grasping this new reality. "They just couldn't seem to get [the original Protective Mobilization Plan] out of their heads. . .," and "they would need a place in which to train successive groups of people," he complained. In addition, the approval of the draft in fall 1940 assured the conscription of a substantial number of men, most of them "citizen-soldiers who would need housing and training facilities."[14]

Not only did troops stationed indefinitely in the United States require better accommodations than did troops on a brief stopover on their way overseas, but increased public expectations as to what constituted decent and healthy facilities also played a part in reassessing the design of army accommodations. The rise in the standard of living since World War I, in spite of the depression, and the million concerned mothers raising their voices in the public sphere were determinative factors in the shifting conceptions of acceptable army housing during this period. For example, a witness to the House hearings on defense construction in spring 1941 displayed to the congressmen a letter from a citizen who had worked on World War I camp construction. Comparing Massachusetts' Camp Edwards to World War I camps he claimed, "Barracks at Edwards are well heated and ventilated and have washrooms, toilets, showers and drinking founts in them. This all adds to the cost, but I, as a citizen, think our boys deserve these comforts." In numerous letters from alarmed constituents, congressmen read about rumors or suspicions that draftees might be suffering from inadequate conditions. Texas Senator Tom Connally received a letter from a woman in Lancaster, Texas, who wrote to inform him that "soldiers are walking in continuous snow and ice without overshoes or leggings . . . some of the boys are sick with flu due, no doubt, to lack of overshoes. Can anything be done to relieve this situation?" Senator Wiley of Wisconsin received a report from a woman in Wausau, Wisconsin, who wrote that "At present there are some 60,000 national guards at Camp McCoy . . . they are living in a swamp with inadequate quarters and have no food. Many of them are sick . . ."[15]

The political pressure engendered by the widespread concern over army accommodations affected upon legislation, particularly the Selective Service Act. Passed in September 1940, the bill explicitly specified that no one would be sworn into the service unless the government had made adequate provision "for such shelter, sanitary facilities, water supplies, heating and lighting arrangements, medical care and hospital arrangements . . . as may be determined . . . to be essential to public and personal health." To a large degree, this requirement limited the War Department's troop housing considerations. Even if the international situation had permitted the Protective Mobilization Plan's rather limited mobilization housing reminiscent of World War I, public opinion in 1940 clearly would not have countenanced it. Instead, the sheltering requirements of the Selective Service Act were "instrumental," Colonel Chamberlin of G-4 told

the Truman Committee, "in causing the War Department to decide to build the type of shelter which we have built." Finally, the public pressure for adequate army housing had reverberations at the highest level of public dialogue--that of presidential politics. Nineteen hundred forty was an election year, and in the fall Republican candidate Wendell Wilkie charged that, contrary to the legislation, the camps would not be ready when the first troops moved in. Roosevelt promised in response: ". . . I can give assurance to the mothers and fathers of America that each and every one of their boys in training will be well housed."[16]

In summary, a variety of factors in summer and fall 1940 influenced the design and construction of barracks by the Construction Division. Contrary to all prior expectations and planning, the War Department suddenly faced building a vast number of more substantial structures in the United States, all of which would house an expanded army for an indeterminate length of time. Moreover, tangible public pressure assured that these buildings would reflect the standards to which American citizens had become accustomed. This meant that the structures would be well-heated, well-lit, and well-insulated. They would have indoor plumbing and they would be solidly constructed and built to last for a number of years. It should be pointed out that permanent construction was not a consideration. Peacetime mobilization was still a novelty in the American experience; therefore no one envisioned that the new army would be permanent. Thus, the buildings would be temporary--built to last five to twenty years. When the war was over the army would disband down to its professional core, as it had done after other wars. Indeed, as will be explored below, one of the criticisms of the 800 Series was that it was "too permanent." Yet at the same time, no longer could citizen-soldiers be housed in rough canvas tents quickly thrown up in a vacant field, or in warehouses converted to dormitories. The times and the public demanded something more substantial. And by fall 1940, events were coming together to ensure that whatever the army built, it would have to go up in a hurry.[17]

FINALIZING THE PLANS

It was at this point that Hartman's lonely and under-funded work on the 700 Series in the 1930s suddenly became important. The Construction Division had not been totally unprepared for the emergency in spring 1940. For thanks to Hartman's foresight, the Quartermaster Corps already had drawings for wooden mobilization buildings which seemed exactly what the new situation required. Or did they have such plans? After a stint in California, Hartman returned to Washington in March 1940 to head the Construction Division. After a conference with chief of staff Marshall, he became convinced that mobilization would soon be underway, and thus immediately went to check on the plans that they had drawn up in the 1930s. There Hartman ran into an unpleasant discovery. In his absence, someone had markedly altered the plans, changing them so they could no longer be used. Furthermore, the remainder of the plans had disappeared. In Hartman's words, "I checked with the Construction Division, G-4, and found that their plans had been destroyed."[18]

Given that the Construction Division was building 700 Series structures in fall 1939 in response to Roosevelt's declaration of a "limited emergency," it is hard to imagine that Hartman could not lay his hands on any serviceable plans outside of Washington. In fact, a memo to G-4 in September 1939 reveals that at least some 700 Series plans were "in the hands" of the zone constructing quartermaster at Fort Sam Houston in Texas. Furthermore, it is equally unimaginable that Hartman, faced with the loss of a significant part of several years' work, left any stone unturned in his search for the plans. At any rate, he had no other choice but to "take some of the older employees" who were "able to redraw the essential plans before we had to start work in the field." Hartman also made use of an impressive array of expert advice in the redrawing process. Among those brought in as experts to serve on a "Construction Advisory

Committee" were John Hogan, President of the American Society of Civil Engineers, Stephen Voorhees, past President of the American Institute of Architects, Alonzo Hammond, President of the American Engineering Council, and Malcom Pirnie, General Chairman of the Construction League of America. With this sort of leadership, the engineers and architects at the Ft. Myers warehouse cum design studio were able to deliver the drawings--the latest, revised version of the 700 Series--on time.

When completed, the drawings offered blueprints of over 300 assorted structures. Though a much more detailed examination will be offered later, here we might briefly note that the barrack type incorporated changes reflecting a longer troop occupancy and higher living standards. Instead of stoves, the barracks included a central heating system. Though the drawings included Plan No. 700-1185, in which plumbing facilities were in a separate building, the barracks were modeled almost exclusively on Plan No. 700-1165, with toilets and showers inside each structure. Durability was an important consideration as well. The barrack drawings substituted concrete foundation piers for the wood piers in the 600 Series of the World War I era, and also added termite shields. Another important change, especially from a visual aspect, was the addition of "aqua medias," an overhanging eave unit which circumscribed the building above the first-floor windows and served to keep water off the structure, which was an important consideration on all-wood buildings.[19]

The War Department quickly accepted these new mobilization structures as the standard for army construction. In fact, Hartman specified that the revised drawings were standard as of July 19, 1940, and that constructing quartermasters should destroy all prior "obsolete" plans immediately. As the schedule for construction began that summer, the War Department issued its first basic directive on its construction policy on June 15, 1940. According to Alice Rose in *Military Construction in the United States Under the Direction of the Quartermaster Corps and the Corps of Engineers*, the document laid down the fundamental principles under which the department's huge construction program was to be executed.

The War Department envisioned that the cantonments would be built on 125-man company blocks. Each company unit would contain two 63-man barracks (the housing capacity of the basic Plan No. 700-1165) with inside lavatories, one mess hall, one recreation building, and one supply building. For extensions of the camp, the directive ordered that more 63-man barracks be added and the mess hall capacity in each company unit increased. Moreover, the directive went on to mandate that permanent construction on posts would be suspended: from then on the Construction Division would be concerned only with temporary construction. The War Department explicitly charged the bulk of barracks construction to the Quartermaster Corps, and intervened in what would be a continuing problem throughout the camp construction: the tendency of individual constructing quartermasters to change the mobilization plans to fit local conditions or their own peculiar needs. The General Staff thus ordered the Quartermaster Corps to furnish all concerned with "a complete set of plans for mobilization construction and revisions thereof," for "only standard buildings of the mobilization type will be constructed for increases in the army." Army command went on to order strict adherence to these plans, though welcoming "constructive recommendations for changes of design for future building." Finally, it should be pointed out that the War Department still planned a limited use of tents--at least one aspect of the old Protective Mobilization Plan that was still respected. As will be pointed out below, in areas in which the winter temperature rarely dipped below twenty degrees--mostly in the deep south--tents were the preferred housing option, though this still required wood-frame construction as well as wooden mess and administration facilities.[20]

In the space of no more than three months, the Construction Division of the Quartermaster Corps made the transition from an agency planning for mobilization to one charged with a vast construction program. Suddenly it was awarded an unprecedented amount of funding (though it would pale in comparison with the monies to come). Suddenly it had identifiable goals for troop housing and approved, set plans from which to build. By late summer 1940, the only item that was not quite clear was the amount of troops that

the Quartermaster Corps would need to house. And as events unfolded, the Quartermaster Corps quickly saw that the number would be substantial.

THE MAGNITUDE OF THE TASK

By August 1940, recent expansions of the army totaled about 300,000 men, a number that strained the army's housing capacity. In all probability, the Quartermaster Corps was unable to billet the additional 75,000 troops the President had ordered enlisted that June. Yet this was only the beginning of rapid expansion. On August 27, Congress finally approved pending legislation to federalize the national guard. By September 9, it had appropriated $128 million with which to house these 100,000 men who, the Construction Division was told, would be arriving for service on October 15. The Quartermaster Corps would be expected to provide shelter and facilities for these new troops by that date.[21]

Even more ominous was the coming of the draft. On September 16, 1940, President Roosevelt signed the Burke-Wadsworth Bill (the Selective Service Act) which implemented the draft. It was followed by the "Third Supplemental Defense Appropriations Bill" of September 24, 1940, that included $310 million for shelter for the draftees. The largest slice of funds for camp construction became available just "as the leaves were beginning to fall," stated General Richard C. Marshall, Jr. The onset of fall was important; the bulk of camp construction would have to take place in the winter months.[22] Winter construction would be difficult, but the scheduled arrival of troops prohibited the delay of construction until spring. Indeed, the induction timetables formulated by the War Department kept the pressure on the Construction Division full throttle. The raw numbers alone spoke of a crisis.

Housing the federalized guard was a nightmare in itself. As Lenore Fine and Jesse A. Remington point out in *The Corps of Engineers: Construction in the United States*, "counting from 9 September, the day appropriations became available, Hartman had one week to three months to ready camps for the guard divisions." Of course, regular troops and guardsmen could be expected to tough it out for a while with tents and latrines. Yet Congress had made it abundantly clear that this was not acceptable for draftees: "snug barracks, toilets, showers, heating and electric lights would have to be available when they arrived." The Construction Division could expect the draftees to arrive by November 15, with a total of 400,000 conscripted by the middle of January. The call-up schedules issued by the Selective Service noted that this would be merely the first surge of a rapidly advancing tide. The Quartermaster Corps, of course, would need to house them all. The Construction Advisory Committee calculated in October 1940 that facilities would be needed to accommodate 700,000 men as of February 1941, as well as 400,000 more that would be arriving between April and June.[23]

Not only did the Construction Division have to deal with these troops; it also faced the additional task of building facilities for the Air Corps. Throughout World War II the Air Force was a part of the army. It wasn't until after the war that the Air Force became a distinct service of the armed forces. This meant that the construction of the facilities for the Air Corps initially fell under the purview of the Quartermaster Corps, until this task was transferred to the Corps of Engineers in December 1940. With the rapid expansion of the Air Corps in World War II and the scope and variety of its building program, facilities construction quickly developed into a whole new building "front," particularly after the Corps of Engineers took it over. The limited focus of this study, however, precludes a specific examination of Air Corps construction (though technically this remained a significant part of army construction). It is only important here to note that a significant aspect of the first stage of the mobilization effort included a major barracks construction program on new air bases.

By the late 1930s, the War Department was working steadily to advance U.S. air power. And by April 1940, the Quartermaster Corps was already working on about $91 million worth of Air Corps construction, 45 percent of it in the domestic United States. Then, in response to the German blitzkrieg, which demonstrated the substantial power of enemy air bombing, Roosevelt quickly turned to a frightened American public and pressed for the vastly increased expansion of U.S. air power. In his emergency defense authorizations in June 1940, the President received large funds for this purpose. Much of this money was quickly poured into the Corp of Engineers' hands for the construction of runways and hangars; for the emergence of air power had just begun to stimulate the new science of airport engineering, and the Corp of Engineers rushed into this new field.[24] On a more mundane level the Quartermaster Corps worked hard in the summer and fall 1940 to provide housing for new pilots in training. Between September 1940 and January 1941, thirteen air stations for pilot training were scheduled for completion, most of them supplying required facilities for hundreds of men. An examination of the design of the required structures reveals that they were of the standard 700 Series construction, including the basic Plan No. 700-1165 for a barrack and its matching Plan No. 700-1116 for a mess hall.[25]

BUILDING THE CAMPS

The volume of new construction was indeed overwhelming. The Construction Division plunged into the work in early fall, getting underway even before all the money had been appropriated. Borrowing $29 million from the president's "blank-check fund" enabled the constructing quartermasters to wade into the task around Labor Day, beginning, for example, one of the first camps--Camp Edwards--on September 12. Due to the haste and the timing involved, there were problems with supply, with contracting, with labor, and with administration. A project of this magnitude could not escape such problems. The wartime congressional investigating committees--including the one in which Harry Truman began his rise to fame--came into being as a result of these various problems. In spite of the difficulties, the camps went up.[26]

In terms of administration, the construction quartermaster was the on-site boss at all the construction sites. It was his responsibility to come up with the design for layout and deal with the contractors. For these duties he was held responsible by headquarters. The larger administrative structure of the Construction Division varied with the commands of two different chiefs during the years 1940-41. Brigadier General Hartman, recently promoted from the rank of Colonel, formed the core of his policy around the contractors. He selected the best architectural and engineering firms available and awarded them, in Fine and Remington's words, "a large measure of independence." Constructing quartermasters were ordered to "go the contractor's way, so long as fundamental laws are not violated and the government's interests are protected." Although Hartman preferred this policy, as events turned out it gave him relentless trouble. One of the reasons for the Truman Committee's vigilance was the suspicion that the contractors were more active in protecting their own interests than the Government's.[27] Brehon Somervell, taking over for Hartman in December 1940, wisely believed in a much more decentralized organization. Accordingly, he set up nine territorial construction zones in early 1941, each headed by a zone constructing quartermaster who was responsible to him. The zone offices functioned as Construction Divisions in miniature, altogether accomplishing many of the tasks formerly done in Washington. To Somervell, the zone constructing quartermasters were crucial; they were the "backbone" of his organization. He told his staff in February 1941 that "the Zone Quartermasters must function. If they don't, we won't." Still, like Hartman, Somervell retained control over structure design, contracts, and other advisory and directive matters.[28]

In a nation still by all accounts in a severe economic depression, obtaining enough labor was not a problem. The Associated General Contractors of America estimated some 8 million men unemployed in spring 1940. When construction began the contractors were forced to turn away thousands of applicants:

Figure 6 *Cantoment construction, Camp Edwards, Massachusetts, 1940.*

Figure 7 Workers involved in construction, Camp Ord, California.

29,000 at Maryland's Fort Meade and 36,000 at North Carolina's Fort Bragg. Skilled workers, however,were harder to find than unskilled laborers. A nationwide survey by the Bureau of Labor Statistics, Department of Labor, in summer 1940 revealed only 366,000 unemployed workmen skilled in the construction trades. Moreover, many skilled carpenters had found employment with the WPA. By moving to temporary defense work, such men risked losing their relief status. Thus, few left the WPA to work for the War Department. Contractors were simply forced to devise strategies to alleviate the skilled labor shortage.[29]

A common practice was to divide construction teams into highly specialized units, each performing a single task. In an assembly line approach, the workers travelled from building to building constructing their discrete portion. Another strategy was to use some simple prefabrication; this worked well at Camp Blanding in Florida. The contractor there erected a sawmill at his lumber yard and manufactured buildings in sections. Lastly, the simplicity of the structures guaranteed that unskilled workers would be able to assemble them with ease. The construction manager at Camp Edwards stated that ". . . simple framing drawings were provided that enabled building the camp on time with a high percentage of unskilled workers." And as the pace of the camp construction program quickened, contractors hired such workers at a corresponding pace. Fine and Remington record that the number of men employed on military construction projects rose from 5,380 in July 1940 to 396,255 in January 1941.[30]

Consistent with the terms of decentralization, the organization of labor was managed by the individual contractor. The central Construction Division refused to intervene in a contractor's recruiting methods, and expressed no preference regarding the use of union or non-union labor. The vast majority of these workers were thus hired by the contractor for whom they worked. Fine and Remington claim that some of the workers were paid by the WPA and others by the army. Yet WPA funds were always limited to barracks construction, and in February 1942 the War Department ruled that WPA funds for labor were no longer to be used for any temporary mobilization construction.

As organized labor became increasingly powerful during the early 1940s, soldiers were not permitted to engage in construction in the continental United States. Organized labor was active in camp construction in other ways as well. Discontent with the War Department's expressed indifference to the closed or open shop, unions mounted an organization drive as the pace of camp construction increased. In the early months of the war emergency, the unions were able to make steady progress--though not without some necessary measures. A strike of carpenters at Fort Meade, for example, resulted in the union winning its demand for higher wages.[31]

As it turned out, labor troubles ranked relatively low on the list of the Construction Division's problems. Many of the difficulties arrived with the selection of the site. An ideal site for a camp was located on flat, well-drained but solid land that was cheap and easily obtainable but still close to centers of population and transportation and with a ready and bounteous water supply. Sometimes, for a variety of reasons, the Construction Division faced building at sites that fell far short of this ideal. For instance, the site for Camp Blanding was pushed through by enthusiastic members of the Florida National Guard, who picked a beautiful, lush spot, covered with vines and palmettos, right next to sparkling Kingsley Lake in central Florida. When the constructing quartermasters began work, they discovered less attractive aspects: large patches of swampland and heavily timbered areas requiring extensive clearing. Two million cubic yards of earth needed to be brought in, and still the drainage at the camp--much of it two feet below the lake level--was exceedingly poor. Moreover, the "high-capillary" soil functioned to pull water to the surface. Construction workers called the Florida soil "sugar sand" and lamented that "We're building this camp on a sponge." Consequently, Blanding cost $17 million beyond the original estimate.[32]

Other selected camp sites had similar problems. Indiantown Gap in Pennsylvania was planned on a thin strip of rolling land at the base of a mountain. This necessitated a "string-bean layout" with miles of extra roads and utilities that increased construction expenditures. Construction workers quickly discovered another problem: heavy shale beneath the surface, requiring power shovels and backhoes in excavation. As a result of these unforseeable difficulties, Indiantown Gap ran $8 million beyond the original estimate. The construction of Fort Leonard Wood in southwest Missouri also faced problems. Located amidst 65,000 acres of easily obtainable national forest land, with plenty of water available nearby, initially it seemed like an ideal spot. After the decision to build the camp was finalized, the Quartermaster Corps discovered to its chagrin that the nearest railhead was in the town of Newburg, twenty-five miles to the northeast. The problem was finally "solved" by building a spur track into the camp that, passing through the foothills of the Ozarks and over the Big Piney river, cost $3 million and took five months to build.[33]

The weather during winter 1940-41 posed another, more serious, problem which affected nearly all of the construction sites. Construction in inclement weather would be difficult in any year but by all accounts that winter was "abnormally severe." One can only imagine the difficulties and hardships occurring in camps in the north and along the eastern seaboard, where freezing temperatures were experienced during what was expected to be the mildest of winters. At Fort Devens in Massachusetts, for instance, crews labored hard digging sewer and water-line ditches in the frozen ground, for frost had penetrated to a depth of four feet. At Pine Top in New York State, workers poured concrete in sub-zero conditions. In other regions of the country it rained almost continuously, turning construction sites into seas of mud. Conditions

were so unfavorable at Leonard Wood that the heavy hauling of supplies and equipment in and out of the camp was stopped for three weeks in January while roads of crushed rock were laid down. A similar problem occurred at Camp Hulen, on Texas' Gulf Coast, where troops tethered pet ducks in front of their tents while road crews slogged it out in the mud and construction costs soared. Across the continent, California experienced "the wettest season in a generation." "We are completely flooded out here. . . ," the contractor at San Luis Obispo reported to Somervell, and ". . . we have had a whole season's rainfall in about ten days." Baton Rouge endured its worst rainy season in a decade. And Topeka recorded its wettest season "in the history of the weather bureau." Altogether, the weather was a disaster.[34]

Still, camp construction proceeded, and in spite of the obstacles, made remarkable speed. The rapidity of camp construction was due to several interrelated factors. First, the division of labor among the construction crews played a big part, as described above. Second, the standardization of the building plans was key to a speedy erection. Not only did building standardization enable crews to pick up speed, but it also made possible a third factor: the precutting of lumber and prefabricating of units. The plans could be sent, as at Fort Ord, to a central carpentry shop where the floor beams, wall columns, roof, rafters, bridging, joists and bracing could all be cut to shape, regardless of what particular barracks they were for. In an advertisement in *The Constructor* entitled "Rolling out the Barracks," one company boasted that it could turn out "4800 completed rafters" and "12,000 studs" every eight hours, and then asked "Can you match such production?" "This method," the company pledged, "will save you layout time, material handling, cutting time, hiring and erection time." Whatever the final factors, by March 1941 the

Figure 8 "Building the Camps:" An historic view of 700 Series cantonment construction.

constructing quartermasters and their contractors were finishing buildings at a breakneck pace. At Fort Ord buildings were finished at a pace of one every fifty-four minutes.[35]

As the camps neared completion, the Quartermaster Corps could point to some impressive accomplishments. In spite of the problems with the sites, labor turmoil and the trials of winter, the first camps were finished by spring 1941. And the total number of buildings at some of the camps revealed successful, albeit hard, work. By April 1941, 1,054 buildings--mostly barracks, mess halls, and administration buildings--had been completed at Indiantown Gap. Twelve hundred structures dotted the landscape at Ft. Ord; 1,400 buildings, constituting facilities for 30,000 troops, had been completed at Camp Edwards by June 1941. By the last day of June, the Construction Division of the Quartermaster Corps had provided shelter for 1,200,000 soldiers. With housing capacity for only 300,000 the previous August, the Quartermaster Corps had completed a construction program to adequately house almost a million men in little over ten months.[36] The completed camps served as ample evidence for Secretary of War Stimpson's claim that ". . . no major country in the world . . . has ever before housed its military forces in so brief a time and upon so adequate a scale for ministering to their necessities and comforts."[37]

This massive program included much more than just building barracks and mess halls. The American people demanded a fair amount of army comfort for their soldiers. By the time a camp was considered complete, it not only had the appearance of an army camp, it also maintained many of the conveniences and functions of a city. In his annual report of 1941, Stimson noted:

> A program of housing involving the construction of over 40 veritable cities qualified to receive populations running from a minimum of 10,000 to a maximum of over 60,000 inhabitants and containing all the necessary utilities and conveniences including recreation buildings, theaters, service clubs, chapels, athletic areas, hospitals, bakeries, laundries and cold storage plants, was carried through on time and with a minimum of hardship to the troops.[38]

In some cases, these "camp-cities" grew so large as to dwarf nearby civilian cities, even state capitals. For example, Fort Bragg's troop population greatly exceeded the population of the state capital at Raleigh, while the soldiers at Camp Blanding totaled a population five times that of Tallahassee, Florida's capital city.[39]

These accomplishments were partially recognized by the general public due, in part, to a very active publicity campaign that was run out of Somervell's office. In the doldrums of winter when construction was besieged by problems, *Time* magazine lambasted the "bumbling quartermasters." By the time the camps approached completion, however, media coverage took on a more laudatory air. The similarity between articles in various construction industry publications, such as the *Engineering News-Record* and *The Constructor*, indicate that they were using Construction-Division press releases almost verbatim, suggesting the emergence of a more favorable position toward the Construction Division's efforts. An independently written article in *Fortune*, as well, praised the "half-horse, half-alligator toughness" of the constructing quartermasters.

Figure 9 Chapel (700 Series) at Fort Meade, Maryland, 1953.

Figure 10 Interior view of Regimental Chapel (700 Series), Camp Shelby, Mississippi

Figure 11 *World War II barrack interior.*

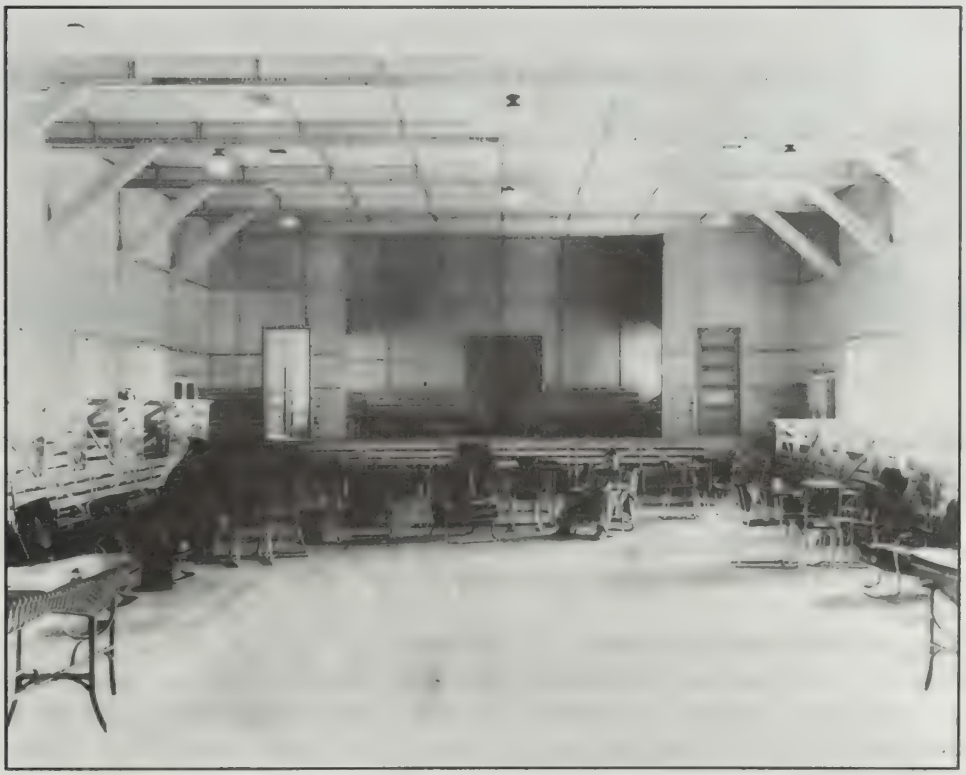


Figure 12 *Interior view of Recreation Center.*

HOUSING FOR BLACKS, WOMEN, AND PRISONERS OF WAR

During World War II, Jim Crow laws of racial segregation were still widely practiced in the United States. The belief in "separate but equal" facilities for black and whites--embodied juridically in the 1894 Supreme Court decision, Plessy v. Ferguson--was exercised by the army in housing black troops. There were no special drawings for black housing, although "from the morale standpoint, it [was] believed highly desirable to house all colored troops in one area." In the South, segregation was accommodated further by adding separate toilet facilities for blacks in theaters.[40]

In contrast, the Women's Army Corps (WAC) received "separate but better" facilities. Standards for housing the WACs were established in April 1943. They stated that "standards for housing the Women's Army Corps should be higher than those for the housing of male personnel, with additional changes where differences between men and women necessitated such changes and adjustment."[41]

The women's barracks had their own drawings, including a plan for new construction and a plan for remodelling existing enlisted men's barracks.[42] Female occupancy was accommodated by the installation of toilet partitions and doors; the subdivision of showers and hanging of shower curtains; the hanging of window curtains; the construction of a closed corridor from T.O. buildings to latrines; the inclusion of laundry tubs and ironing boards; replacing fire-escape ladders with stairs; and adding a beauty parlor to the company grouping. In addition, women's housing was located at least fifty yards from the nearest men's housing.[43]

Standards for prisoner of war (POW) housing were governed by the Geneva Convention of 1929 which required that POW camps provide housing that was sanitary, healthful, adequately heated and lighted and generally conformed to the detaining power's troop facilities.[44] Public opinion influenced the War Department's decision to install POW camps farther away from settled areas and to use their labor only when civilian manpower was unavailable.

Housing POWs was a new experience for the United States. In World War I, POWs were held behind the lines in theater-of-operations buildings. State-side POW housing, like mobilization construction, was based upon standardized plans. Each facility included prisoner barracks, guard barracks, administration buildings, a warehouse and utility area, hospital compound, and a recreation area all within a stockade guarded by watch towers.

The POW barrack, Plan No. 800-350, did not include inside toilets or showers. Reminiscent of the drawings in the first 700 Series, a separate latrine and bath house was provided. In keeping with the Geneva Convention's regulation that POWs may be interned in enclosed camps, but not confined or imprisoned, the non-detention barracks were not divided into cells. In fact, the POW barrack was based on the same components as the enlisted men's standard barrack, Plan No. 800-443.

The cantonment construction program between the years 1940-41 was a mammoth undertaking. The size and design of the camps were comparable to cities, complete with site selection and planning requirements, utility needs, grading and paving concerns, as well as large-scale construction. The sheer volume of mobilization structures that was needed in the United States mandated an efficient method of construction. This objective was fulfilled through standardization.

Figure 13 *World War II internment barracks, Camp McCoy, Wisconsin.*

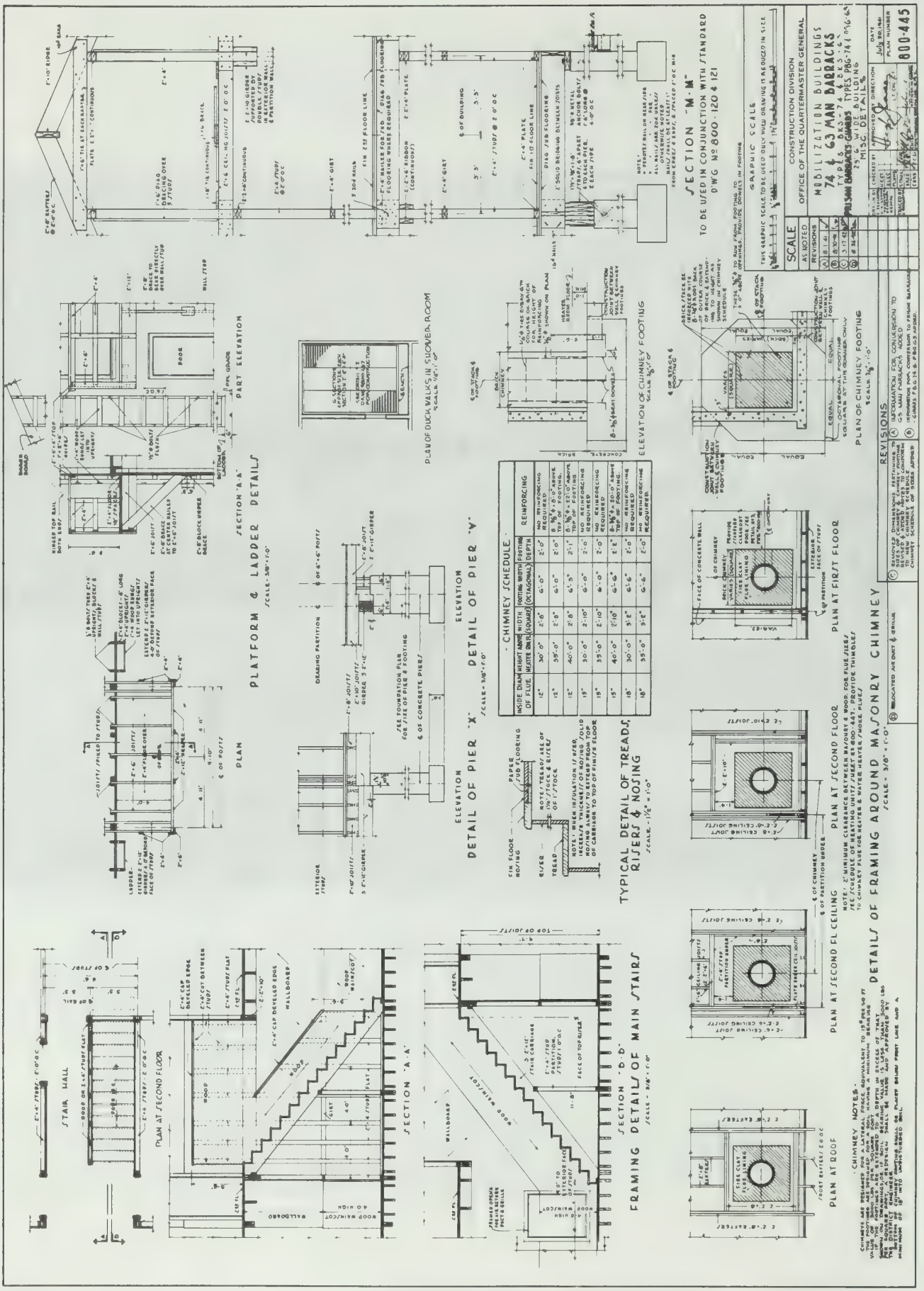


Figure 14 Drawing 800-445, basic barrack plan.

THE MOBILIZATION DRAWINGS

DESIGN PRINCIPLES AND CRITERIA

In preparing mobilization construction plans, Brig. Gen. Hartman was guided by five principles: speed, simplicity, conservation of materials, flexibility and safety. These criteria were used to guide the construction program throughout the duration of the war.[45] Throughout the stages of the construction program, speed was given the highest priority. The Selective Service Act stipulated that troops could not be called up unless satisfactory shelter was in place. Thus, expansion of the army in 1941 generated a second major construction push. Speed was necessary in design as well as construction so that the buildings could be erected quickly and easily.

In the interest of achieving speed, simplicity came into play. *The Engineering Manual* stated that simplicity was the primary prerequisite for speed and was essential in reducing labor, material, and transportation requirements. Any cost benefits resulting from simple construction materials and methods were also appreciated, although cost was not a notable concern. The manual further stated that:

> Wood has been used for substantially all troop housing requirements. Standard size lumber is used throughout, and where possible, in standard lengths. Complex framing details are avoided, and interior finishes generally omitted. Equipment of standard makes and capacities, readily procurable, is utilized to maximum advantage. Interior electrical work, plumbing, and other mechanical facilities are kept to bare necessities.[46]

As mentioned earlier, simplicity in construction enabled unskilled and semi-skilled workers to be hired to build the camps. This was important not only for wage savings, but also later in the war when a skilled-labor shortage developed.

Conservation of materials, the third criterion, was an increasingly important factor in the design and construction of camps and individual cantonments. Due to combat equipment and vehicle needs during an actual war, wood would be more plentiful during war than would metals. Thus early proposals for steel barracks were rejected by the General Staff.[47] As the war progressed, however, even certain types and grades of lumber became difficult to obtain. Thus, conservation was encouraged by the use of substitute materials such as felt and gypsum wallboard for wooden, wall sheathing.[48]

Flexibility was a double concern. The specifications needed to be flexible enough to accommodate substitutions of available suitable materials without requiring major structural revisions. The structures themselves also needed to be adaptable to alternate uses. For example, the barrack was designed for 63-man capacity; yet it was also large enough to permit additional bunking.[49]

Finally, safety factors had to be taken into account. *The Engineering Manual*, however, reveals that safety factors were a low priority:

> The temporary character of the construction program, the large number of buildings of identical types, and the necessity of conserving materials, transportation, and labor justify the adoption of safety factors substantially lower that those in common use prior to the present emergency. . . . Warehouses, barracks, etc. warrant low safety factors, in view of the large number of these buildings required, the comparative small loss through the failure of such structures, as compared with overall savings in cost, material, transportation, equipment, and labor.[50]

Although minimal, the safety standards were nonetheless adequate for the short-term use offered by a temporary building.

In addition to the aforementioned criteria, Hartman had to comply with War Department standards for the development of the 700 Series plans. The June 15, 1940, "War Department Construction Policy" required that "mobilization type temporary construction" be provided where additional shelter was required.[51] The July 18, 1940, "Supplement to War Department Construction Policy" specifically stated:

> For additional shelter, the War Department plans to provide housing where practicable on the basis of 125-man blocks, consisting of two barracks (63-man capacity with inside lavatories), one mess hall (170-man capacity), one recreation building, and one supply building, and such facilities as will make them habitable. . .
>
> Frequent changes of station and strength of units during the present emergency make impractical any attempt to build for a specific unit. The block system specified above with the layout so arranged that additional 63-man barracks can be added to bring units to war strength, will furnish sufficient flexibility to accommodate any type unit. . .
>
> Evidence is accumulating in the War Department that Commanders in the field are in some cases attempting to change the type plans for mobilization buildings. In order to save time, only standard buildings of the mobilization type will be used for the shelter necessitated by the increases in the Army, unless specific authority in each case is obtained from The Quartermaster General.[52]

The July 18, 1940, "Supplemental Policy" is a viable indicator that the mobilization construction program had progressed in only three months from a generally conceived initiative to a program with specific objectives.

None of Hartman's design principles articulated what these mobilization buildings were to look like or how they were to function. For this, he based his drawings on the 600 Series plans of World War I. Still, Hartman's designs reflected the technological improvements achieved over the subsequent years. Indoor barrack lavatories replaced separate latrines and bath houses, central heating replaced stoves, iron pipes replaced wood staves, and garages replaced the outdated stables.[53] While structural evolutions since World War I mandated some changes in appearance, the overall domestic look and scale was retained with six-over-six double-hung windows, wood-drop siding, and two-story height.[54]

Description of Plan No. 700-1165, Enlisted Men's Barrack

The standard 63-man barrack, developed by Hartman's design team, was 29'-6" wide by 80' long, and two stories tall. Construction materials and techniques were similar to any other mobilization construction structure. The wooden sill rested on concrete or masonry footings which were initially capped with galvanized or painted metal sheets that functioned as termite barriers. The framing was of wood platform construction, generally spaced on 3'-0" centers, with diagonally laid 1" wood sheathing or panels of gypsum board nailed on the studs which, in turn, were covered with building paper and then wood drop siding. Wood joists and girders braced the floors, and early reports of shrinkage led to a double flooring system of flooring sheathing sandwiched between a diagonally laid sub-floor and a top floor. Windows were usually wood sash, but steel was also used. Double-hung windows were more common than casement, but in either case the panes were divided into smaller lights, six-over-six or eight-over-eight being common. Continuous eaves--referred to as aqua medias--capped all windows on the first and second stories. One end of the barracks was used for the heating plant and wet areas, and was therefore placed over a concrete slab foundation.

Hot-air heaters with circulatory fans heated the barracks. The heating system was adaptable to local fuel supplies. Chimneys were set four feet from the exterior wall and were composed of brick at the

Figure 15 *700 Series barrack with double-hung windows, wood drop siding & two-story height, 1941.*

bottom and steel at top. The roof was wood-framed, sheathed, and covered with a mineral-surfaced prepared roofing material. Interiors were left unfinished.[55] The draftiness of these structures was illuminated in a report on barracks heating which stated: "It is not necessary to supply outside air to the circulatory fan as the windows and air leakage provide sufficient ventilation."[56]

Like the other building plans of the mobilization construction program, a single barrack plan was actually composed of several standardized plans. Plan No. 700-1165 also included instructions to use other standardized mobilization drawings for specific construction details. Used in a particular combination, the individual plans, specifying instructions for the various components of the building, produced a barrack formula. Furthermore, these plans could be rearranged to create altogether different mobilization buildings. The plans for buildings such as the barrack, mess hall, and company administration/storehouses, which formed the core of each company's physical organization, demonstrate that each distinct building shared many common components. For example, the electrical, heating, and plumbing details were identical for many building types, and the structural plan for any 29'-6" wide building was the same.

Appendix A shows the specific plans necessary for the 700 Series barrack, and the subsequent 800 Series barrack. Many of the same individual plans appear within the formulas for 800 Series building types. Clearly, the various components were used over and over again in various permutations throughout cantonment construction.

The decision to use cantonments of wood was predicated upon the climate of the camp. Generally, tent camps were used in the south (the +20 degrees zone) and cantonments in the north (the 0 degrees and -20

FORMULAS FOR TYPICAL MOBILIZATION BUILDINGS

63 and 74-Man Barrack
Plan No. 700-1165

Plan No.	Description
700-241	Electrical Plan
700-245	Shelving, etc.
700-1165	Basic Plan
700-1166	Floor and Roof Framing
700-1167	Building Elevations
700-1168	Wall Sections
700-1169	Toilet and Heater Room Details
700-1170	Plumbing
700-1171	Heating
700-1171.1	Alternate Heating Layout
700-3068	Standard Details
700-3070	Standard Details
700-3094	Standard Plumbing Details
700-3099	Standard Electrical Details

63 and 74-Man Barracks
Plan No. 800-443

Plan No.	Description
800-120	29'-6" Wide Building - Bearing Partitions
800-121	29'-6" Wide Building - Bearing Partitions
800-134	29'-6" Wide Building with Two Rows of Posts 9'-10"
800-135	29'-6" Wide Building with Two Rows of Posts 9'-10"
800-142	Alt. Platform Construction 25'-0" and 29'-6" Wide Buildings
800-151	Standard Window Details
800-154	Standard Door Details
800-157	Standard Toilet Room Details
800-185	Interior & Exterior Details
800-186	Interior & Exterior Details
800-187	Interior & Exterior Details
800-190	Metal Smoke Pipe and Cement Asbestos Flue Details
800-194	Standard Plumbing Details
800-196	Standard Heating Details, Warm Air Heating, Smoke Pipes
800-443	Basic Barrack Plan
800-444	Framing Elevation
800-445	Miscellaneous Details
800-446	Electrical and Plumbing Details
800-447	Heating Details

228-Man Mess Hall
Plan No. 800-851

Plan No.	Description
800-101	25'-0" Wide Building Clear Span - One Story - Structural
800-174	Miscellaneous Details - Mess Halls
800-175	Miscellaneous Details - Mess Halls
800-176	Miscellaneous Details - Mess Halls
800-177	Miscellaneous Details - Mess Halls
800-178	Miscellaneous Details - Mess Halls
800-189	Miscellaneous Details - Mess Halls - Architectural
800-190	Metal Smoke Pipe and Cement Asbestos Flue Details
800-194	Standard Plumbing Details
800-199	Standard Electrical Details
800-851	Basic Plan
800-852	248-Man capacity

Storehouse and Company Administration Building
Plan No. 800-661

Plan No.	Description
800-100	25'-0" Wide Building - Clear Span - One Story-Architectural
800-101	25'-0" Wide Building - Clear Span - One Story-Structural
800-151	Standard Window Details
800-154	Standard Door Details
800-157	Standard Toilet Room Details
800-182	Miscellaneous Details, Porches, Breeching & Interior Details
800-185	Miscellaneous Interior & Exterior Details
800-186	Miscellaneous Interior & Exterior Details
800-187	Miscellaneous Interior & Exterior Details
800-190	Metal Smoke Pipe and Cement Asbestos Flue Details
800-199	Standard Electrical Details
800-459	Basic Plan

Source: War Department, Office of the Corps of Engineers, Construction Division, "Index of Mobilization Buildings," Revised January 26, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 735.

degrees zones).[57] Even with their inherent obsolescence, cantonments were still preferred because they were cheap, easy to erect, adequate for shelter and built with readily available material. The supervising architect of the Construction Division recalled:

> You can't . . . build anything designed to stand three or four years that will stand up at all. One strange thing is that it is a good deal cheaper to put people in temporary wooden buildings than to put them in tents. You can't get the amount of tentage you'd need in a mobilization. Of course, there's always been a certain amount of tentage in the Army. When the Army's on the move, you've got to have it.[58]

Thus climatic conditions and the limited feasibility of tentage convinced the army to focus on cantonments.

CONSTRUCTING THE BARRACKS

Lumber in Mobilization Construction

In keeping with the primary emphasis on speed, the mobilization plans provided the quickest, simplest method of erecting a building. The decision to use wooden structures meshed neatly with the emphasis on speed. Wooden buildings were classified by the army as "temporary," thus they did not require a high degree of finish or even structural solidity. In addition, balloon or platform construction was relatively simple to erect and thus required few skilled, and hence expensive, laborers. The goal was to erect labor and cost-efficient structures quickly while maintaining the minimal standards of comfort and longevity. According to Frank E. Lamphere, then Chief of Engineering, Hartman was all "for keeping the structures flimsy," something akin to a "cardboard box."[59] Hartman thus faced the challenge of building minimal structures which would last for a limited period of time and not much longer.

Once the decision was made to use temporary wooden construction, Hartman set out to design structures using the most economical types of lumber. As early as 1938-39 he had replaced earlier construction specifications which called for greater than 14'-0" lengths with shorter lengths which would be available locally. Using standard sizes of lumber enabled the army to predict its lumber needs and to stockpile lumber as it became available. Once he became aware of a lumber industry excess of 10'-0" lengths, Hartman revised the mobilization plans to utilize that length. When those lengths were exhausted, he revised the plans accordingly.[60] Another benefit of standardization was that it readily accommodated experimentation with precut and prefabricated parts.

It was difficult, however, to observe quality control when procuring such massive quantities of lumber. As the peacetime mobilization effort expanded into a full-fledged war effort, the demands for lumber outstripped its availability. *The Engineering Manual* codified the procedures neccessary to mitigate the problems accompanying the use of unseasoned lumber. The manual recommended that timber be stacked for air drying or seasoning under temporary shed roofs whenever possible in order to reduce the moisture content of the timber, which had increased during the war effort due to time constraints. The time between delivery and actual construction often made this process impossible.[61]

Framing and Methods

Once a camp site was selected and contracts awarded for the actual construction, an assembly line approach to production was utilized.[62] Construction crews were divided into highly specialized teams. Instead of delegating responsibilities according to professional expertise--e.g., carpentry would be performed by carpenters only--each stage in the construction process, constituted by a multitude of tasks, was handled by a different crew. Thus one framing crew did the first floor, while another did the second. The use of platform construction, in which the second floor was built on top and attached to a completed first floor, enabled such a separation of crews. The crews would follow each other from building to building, each accomplishing its part of the construction process in succession. Contractors turned to subcontractors for special phases of the project, such as electrical, plumbing, heating, and excavation. Whereas the architectural plans were forwarded by the Quartermaster General's office, the contractors were responsible primarily for the engineering aspects of camp construction such as the grading and paving. The *Engineering News-Record* reported that the assembly-line technique was used extensively at Camp Edwards and Indiantown Gap; presumably it was used at many other camp sites as well.

The first step was for transit crews to mark foundations in each area on batter boards. Finished

Figure 16 Barracks under construction, Camp Leonard Wood, Missouri.

first-floor levels were marked at the corners by level parties. The foundation crew then set the pier footings. Footings sizes varied according to soil conditions and building loads. The greater the load on the column, the larger the footing would be. Hence, a 5'-0" high, 8" square column would rest on a 16" square footing; a 9'-0" high, 10" square column would sit on a 16" square footing.[63] Preliminary plumbing would also be laid at this time.

Meanwhile, the lumber was being prepared. Once the lumber was delivered to the site, rows of power saws were set up in a portable saw mill. The repeated use of standardized lengths enabled the carpenters to turn out quantities of lumber quickly, after which it was promptly funnelled to the construction crews. Rafters, sheathing, headers, studs, joists, cripples, collar beams, canopy rafters, canopy braces, second-story platform braces, stair stringers and more could be precut with tremendous manpower savings.[64] At Fort Meade, it was calculated that a four-saw hook-up produced 150 rafters an hour and could produce as many as 300 or more in that time.[65]

Ready for framing, a building's construction crew was further subdivided. One group laid only the first floor framing. Then the plumbing crew would return to finish the above-floor installation. Another crew assembled the wall frames on the ground and raised them. Frequently the walls would be completely sided before erection, and the window openings cut out with power saws; in other instances the siding might be applied after the walls were raised.[66] The aqua medias over the first floor windows were assembled either as part of the second-story wall panels and were inserted into a slot between the first and second floors, or in some cases they were merely "falsework" and nailed on afterwards.[67] The aqua medias, whether as a continual band or as individual units, capped all first-floor windows in a cantonment. The next crew completed the second story, and yet another constructed the roof. Roofs were covered with bituminous roll roofing on sheathing. As soon as framing was completed the electrical and heating systems could be installed. Similarly, window and door units would be installed after the framing and siding was complete.

In order to keep the cantonment construction running smoothly, shifts were carefully calculated and superintendents were assigned to each phase of construction and each construction crew. All these divisions of labor were intended to keep the pace of construction at a maximum level. As the directives all proclaimed, speed was of the essence.

The Shortcomings of Speed

Despite the simplification and routinization of construction methods, the priority of speed occasionally resulted in poor construction. In February 1941, the Construction Division urged greater care in conforming to specifications, noting that "insufficient nailing, omission of scabs and bracing, use of lumber far below specified grade, bad framing, and faulty installation" were undermining the cantonment program.[68]

An example of poor-quality construction, even when specifications were followed, was illustrated in the investigation of construction at an Air Corps station. Specifically, the complaint read:

> This building was constructed of unseasoned lumber, using 8d finishing nails resulting in the sheeting being badly warped and on May 6, [1941,] less than six weeks after completion, during a light rain the roof leaked in numerous places; in addition to faulty roofing the siding was placed over the diagonal sheeting using 8d finishing nails which allowed not more than one inch of nails to penetrate the studding of the frame work and in many places the nails did not penetrate the studding at all; at the present time the siding is warped and loose around the entire building, leaving large cracks throughout the wall rendering the building unsuitable for use as a storehouse for valuable equipment, without being reroofed and resided.[69]

The excuse offered was that the received orders directed "that construction be undertaken in the most expeditious manner possible and without delay." Despite rejecting several truckloads of lumber, the field commander was eventually forced to accept lumber with excessive moisture or else further delay the project. The moisture content was increased by rainfall, which further dampened the uncovered lumber. No shelter was provided for the lumber because none was authorized at this early date. Not surprisingly, once the drying process began, the lumber contracted and cracks appeared. In response to the accusations concerning the failure of the nails, it was noted that galvanized nails were specified and the only galvanized nails available were finishing nails instead of the common construction nails necessary for sturdy construction.[70] Thus, even following the rules could still result in substandard construction.

Figure 17 World War II cantoment construction.

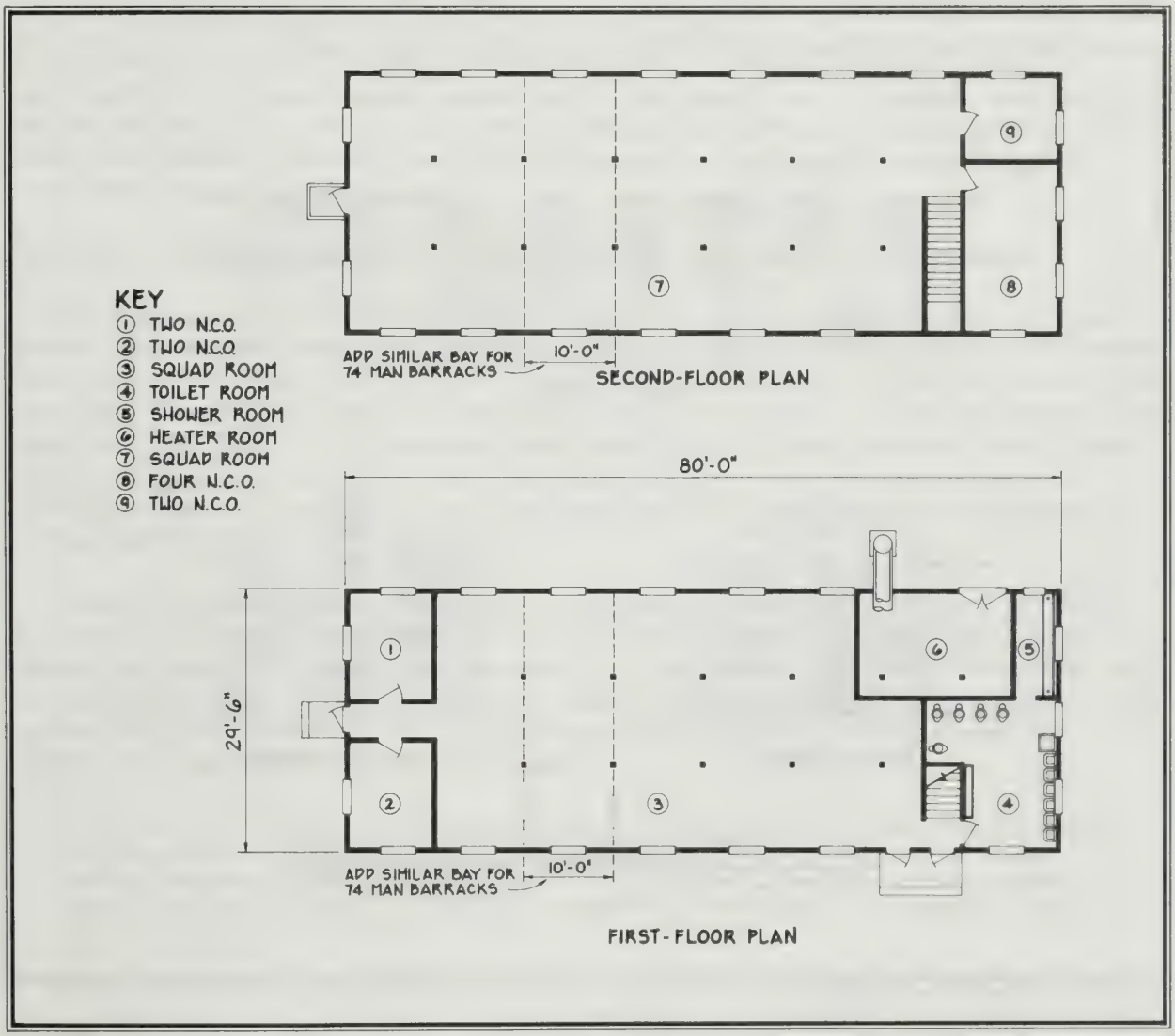


Figure 18 *Floor plans of 45 & 63 Men Barracks - 700 Series.*

Figure 19 Elevations of 45 & 63 Men Barracks - 700 Series.

EVOLUTION OF THE 700 SERIES

By summer 1940, construction was well underway. At the same time, the design section was producing new drawings and revising the "old" ones as they were needed.[71] The 63-man barrack, Plan No. 700-1165, which was most frequently used in the cantonments, also evolved over time. The following sections document the changes made to the 63-man barrack. As many of the structural changes were also applicable to other mobilization structures, the barrack provides a model for understanding the changing character of army mobilization construction. By tracing how and why the barracks changed, it is possible to gain insight into the army's mobilization construction program as a whole as well as how it responded specifically to shortages, to modifications in army strength and organization, and even to public opinion.

Barracks: Their Relationship to the Standard Battalion Block and Troop Organization

The early mobilization drawings included plans for a number of barracks with different capacities, including 25-, 45-, and 63-man units. Despite the June 15, 1940, and July 18, 1940, War Department construction policies stating that the 63-man barrack would be utilized, other capacities continued to be used. Part of the problem, which was recognized by the design section at the time, was that the army simply could not state definitively what size, shape, and capacity the army units would take.[72] New warfare techniques since World War I had rendered the old organizations obsolete and the new organizations were still evolving. It was not until early fall 1940, that specific types of cantonment buildings were developed.[73]

Troop organization as a factor in cantonment design was a two-pronged concern. First, camps needed to be planned so as to facilitate quick access to training grounds, rifle and artillery ranges and armored division grounds. Hence, barracks needed to be located near the periphery of the camp, with easy access and egress. Second, barracks were organized so that regiments of troops scheduled to fight together could also be trained together in semi-autonomous groups.[74] *Engineering News-Record* explained the organization of troops within a camp:

> Six buildings completed the company group--three barracks, a mess hall, a storehouse and a recreation building. Six company units are placed together to form a regiment group which include (in addition to the company buildings) headquarters administration buildings, infirmary, barracks for the headquarters company, regimental cold storage building, truck garage and fire house. Regimental groups are separate from each other by 250-ft. open strips as a fire break.[75]

As the division training plans changed, so did site planning. For example, the "Schedule of Basic Housing Requirements" for a Motorized Triangular Division was subdivided into nine units: Division Headquarters, Headquarters and Military Police Company, Reconnaissance Training, Signal Company, three Infantry Regiments, Division Artillery, Engineers Battalion, and Quartermaster Battalion. Thus the organization of the units, as described in the above *Engineering News-Record* article, would be adapted to the new division organizations.

The key to determining a barrack's capacity was the overall size of a company. By October 1940, the decision had been made that for triangular divisions a 63- and not 45-man barrack should be used.[76] One year later, the triangular division had been modified.[77] As troop organizations became codified, new directives were issued which explained the type of layout, the capacity, and the number of barracks.[78] Throughout, building schedules were to be coordinated with typical layout plans.[79]

SCHEDULE OF BASIC HOUSING REQUIREMENTS FOR MOTORIZED TRIANGULAR DIVISION

For a Company Echelon:

Building Type	Plan Number	Number of Buildings
74-Man Barracks	800-443	224
112-Man Mess Hall	800-847	27
172-Man Mess Hall	800-849	9
228-Man Mess Hall	800-851	44
Company Administration and Storehouse	800-661	80
Recreation	800-459	40
Recreation	800-460	44

For a Battalion Echelon:

Building Type	Plan Number	Number of Buildings
Administration	800-222	11
Administration	800-210	5
Storehouse	800-663	7
Post Exchange	800-531	2
Recreation	700-310	2
Infirmary	800-1429	2

For a Regimental Echelon:

Building Type	Plan Number	Number of Buildings
Administration	800-210	4
Storehouse	800-664	4
Post Exchange	800-480	4
Recreation	700-310	4
Infirmary	800-1429	4

For a Division Echelon:

Building Type	Plan Number	Number of Buildings
Administration	800-204	1
Administration	800-210	1
Storehouse	800-664	1
Post Office	800-217	1
Post Exchange	800-480	1
Div. Com. Sch. (Mod.)	800-443	2
362-Seat Chapel	800-550	5
Service Club	800-1290	1
Guest House	700-1290	1
Dental Clinic	800-1432	1

For Officers' Quarters:

Building Type	Plan Number	Number of Buildings
Division Commander	800-306	1
Brigade Commander	800-307	2
Regimental Commander	800-308	3
Officers' Quarters	800-317	15
Officers' Mess Hall	800-851	6
Officers' Day Room	800-451	6
Officers' Day Room	800-809	1

For Motor Park Facilities:

Building Type	Plan Number	Number of Buildings
Motor Repair Shop	800-606	23
Oil House	700-384	23
Wash Rack	700-348	23
Grease Rack	800-1026	23
Motor Repair Shop	800-1390	1

For Motor Fuel Facilities:

Building Type	Plan Number	Number of Buildings
Stations	800-601	5
Tanks	800-65-	15
Nozzles	800-616	48

For Guard House Facilities:

Building Type	Plan Number	Number of Buildings
Unit Guardhouse	800-1007	8

Source: Office of the Quartermaster General, Construction Division, "Schedule of Basic Housing Requirements, Motorized Triangular Division." Washington National Records Center, RG 77 - Entry 107 - Box 803.

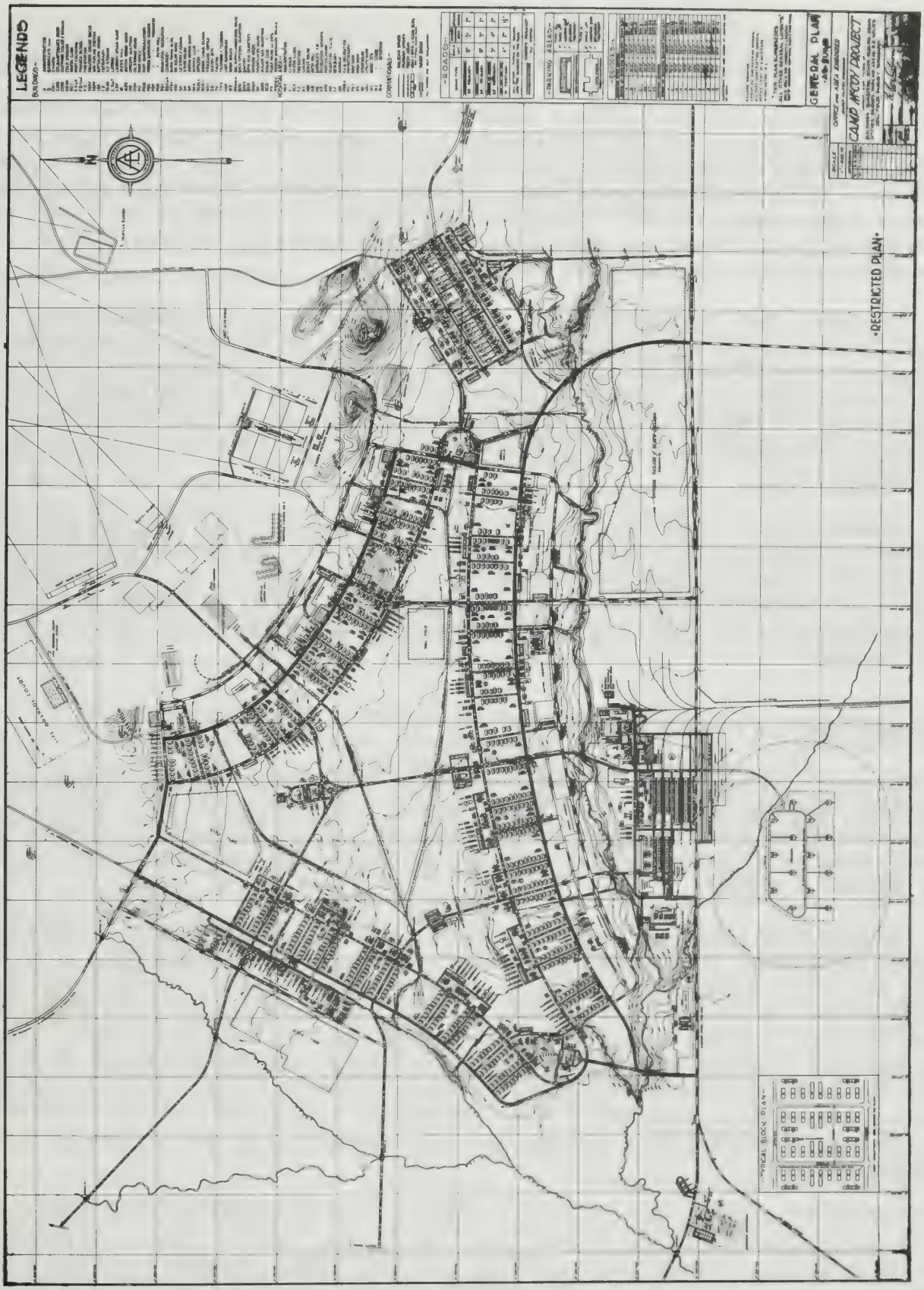


Figure 20 *Triangular Division layout, Camp McCoy.*

As early as January 1941, the engineering branch had reviewed the organization and troop capacities of the various divisions and had determined that the 63-man barrack was suitable only for the quartermaster battalion.[80] It suggested that using 74-man barracks would save space, materials, and concomitantly, money. Specifically, the engineering branch calculated that the substitution of 74-man barracks for 63-man barracks at a triangular division camp would require forty-two fewer barracks and hence save in materials, labor, and utilities totaling approximately $421,000. The substitution of 74-man barracks for 63-man barracks at an Armored Division would reduce the number of barracks by 28 and would effect a cost savings of approximately $326,000.[81] Simply a one-bay elongation of the 63-man barrack, a sketch of the proposed 74-man barrack was drawn in May and it was approved for inclusion in the list of standardized mobilization drawings in July 1941.[82]

In the July 15, 1941, "Revision of Basic Barracks Plans," Casey also suggested revisions to both the 63- and 74-man barracks, including "certain structural improvements in the foundations and bracing, self-supporting chimney in place of guy-supported smoke stacks, improvements to heating system to reduce fire risk, insulation improvements, additional hot water and shower facilities, as well as shelf and coat rack for each occupant."[83] While some of these improvements were made to the Plan No. 700-1165 barrack, others were incorporated in a new set of plans, designated the 800 Series, which were still in the process of being designed.[84]

During the process of construction, the 700 Series was constantly being revised. There were frustrated reports from constructing quartermasters that construction had to be stopped and ripped out to accommodate new directives, often for minor changes which had no significant impact on the overall structure.[85] Finally, the Construction Division established a policy stipulating that revised plans should be incorporated into current construction, unless the cantonment's advanced stage of planning or actual construction made it impractical.[86]

Industry Input and Public Opinion

In the interest of improving the 700 Series, the design section was guardedly open to comments from the field. Attempting to strike a balance between beneficial improvements and wasteful luxuries, and between centralized control over designs and efficient field decisions, the Adjutant General permitted the local constructing quartermasters to adapt the plans to accommodate local conditions, providing that the modifications were minor.

The Construction Division also had to strike a balance between army decisions, industry comments and special interest groups. With the army's decision to use lumber for the mobilization construction, the brick, tile, and concrete industries lodged protests that they were being boxed out of a lucrative market, that temporary buildings were wasteful of tax dollars, and that the availability of materials should dictate what was used where. Likewise, the lumber industry protested when the army opened bid solicitations to steel prefabricators. Addressing the aethetic and moral aspects of construction, Eleanor Roosevelt and W.H. Harrison, head of the Advisory Commission to the Council of National Defense (NDAC), felt that the camps' streets should be curved rather than on a orthogonal grid and urged the construction of churches on the bases.[87] Moreover, they were in agreement with the painting industry that the camps should be painted.[88]

The NDAC assisted the War Department in predicting future procurement needs and appropriate industries in preparing for wartime demands. In fall 1940, the NDAC, with the concurrence of Hartman, contracted with the well-known Chicago architectural and engineering firm of Holabird and Root to review the plans. Generally, the review was favorable, with the added comment that there should be greater

experimentation with alternate materials such as steel and tile, and that site planning should take into better account the natural topography. Too late to effect these recommendations at current cantonments, Holabird and Root urged that they be implemented in the construction push under consideration for the spring 1941 Selective Service call. [89]

G-4's decision that spring to permit construction plans to deviate from the standard plans allowed the field to take advantage of local materials and conditions. By January 1942, however, steel prefabrication was no longer permitted as the metals would be needed for combat equipment.[90]

The New Construction Division

The NDAC was not the only group of experts to whom the Construction Division turned to for advice. Among the many changes implemented by Somervell when he replaced Hartman as chief of the Construction Division in winter 1940-41 was the recruitment of a new group of professionals. In contrast to Hartman's advisors who were retained on a consultancy basis, these professionals became, for a time, actual employees of the Construction Division. Among them were A.J. Hammond, president of the American Engineering Council; George E. Bergstrom, President of the American Institute of Architects; Frederick Fowler, President of the American Society of Civil Engineers; and Warren McBryde, past President of the American Society of Mechanical Engineers. Finally, Somervell was able to persuade the Corps of Engineers to "loan" him three engineering officers to fill three key positions, with the understanding that they would have to be returned in June. Among these officers was Hugh Casey, widely regarded as one of the most brilliant young engineers in the army. He would take over as chief of the design and engineering section under the supervision of Somervell. These men, particularly Casey and Bergstrom, would prove to be especially important in the revisions and changes to barrack design in spring and summer 1941.[91]

Somervell had several agendas to advance with his restructured organization. One was to control the spiraling costs of the construction program. One month after assuming his position, Somervell stated that "nothing aside from crookedness will subject this office to criticism as will exorbitant costs. Dementia dollaritis must be stamped out."[92] Rather than control costs, however, it appears that Somervell only mitigated the impact of increased costs. For example, as delays in the construction program led to cost increases, Somervell responded by ordering studies of the causes of delays. One cost-overrun study estimated that 25-35 percent of the increases were due to the cost of labor and material, 50-60 percent to additional requirements, and 15-25 percent to changes in plans and underestimations of costs. Another study attributed the majority of cost overruns to haste, both in site selection and actual construction. Moreover, by attributing the construction delays to the unavoidable costs of the start-up program under Hartman, Somervell was able to deflect criticism away from himself and towards his predecessor.[93] In order to generate favorable industry press accounts, Somervell hired George Holmes to serve as a public relations agent. Yet, appropriations continued to be approved in light of the need for wartime construction. Somervell thus inherited a program that, while in good shape, still needed to provide additional housing quickly for an expanding army while avoiding the mistakes made in the start-up program. And even though economical measures were important, they were still secondary to speed.[94]

In reorganizing the Construction Division, Somervell clarified the duties of G-3 and G-4; the former would be responsible for proper site selection and the latter would oversee the construction on those sites. In addition, Somervell initiated review of the standard plans and layouts and began to calculate housing requirements for another million men. In this regard, he reconsidered the army's reluctance to use brick, tile, and other products excluded by the original specifications.[95] The 700 Series thus came under intense scrutiny. In response, northern construction was bolstered. Roofing members were increased in size, the number and size of bracing members were increased, and bolted roof and bracing members were

strengthened.[96] As details were altered, stresses refigured, and specifications rewritten, a new series was beginning to take shape under the direction of Somervell.

The changes that Somervell initiated during his tenure were but a precursor to a more significant transformation that occurred when the entire building program was transferred over to the Corps of Engineers. There had long been a rivalry between the two Construction Divisions of the army--the Quartermaster Corps and the Corps of Engineers. In fall 1941, a group of engineering officers, headed by chief of engineers Julian Schley and special assistant M.J. Madigan, saw an opportunity to consolidate all the army's construction activities. Influenced by both favorable sentiment toward the Corps of Engineers in Congress and also considerable congressional dissatisfaction with the Quartermaster Corps' handling of the cantonment construction program, this small group quickly gained the support of the War Department. Fending off proposals to establish a separate Construction Division and gaining the crucial backing of President Roosevelt, Madigan maneuvered through Congress a bill turning over all war construction to the Corps of Engineers. It was signed by Roosevelt on December 1, 1941. Overall, the consolidation between the two divisions went smoothly. Constructing quartermasters were free to transfer into equivalent positions in the Corps of Engineers. The quartermaster zones were easily transformed into engineering districts, and many zone constructing quartermasters became district engineers.[97]

The initial mobilization push to construct facilities for a 1,400,000-man army was essentially complete by late summer 1941. Yet, the work of the Construction Division did not cease. Through impressive arguments before congressional committees beginning in May, Somervell had secured funds to continue building. In July, a supplemental appropriation passed with pleading from Chief of Staff Marshall. After fierce congressional debates, the bill--including $90 million for camps and cantonments--received Roosevelt's signature on August 25. The War Department's most compelling argument for military expenditure was made not in Congress but in the newspapers. Any congressman following the international situation through the media could predict quite easily that the nation might soon enter the war. In the west, Japan continued to take over portions of southeast Asia. In the east, Hitler had invaded Russia, and recurrent Axis sinking of American ships brought the United States closer to the edge of the conflict. It was quite obvious to Roosevelt and other military leaders that, in addition to lend-lease, the embargo of oil to Japan and other non-military measures of containment, the army would have to continue to expand. In addition to other purposes, the bill signed by Roosevelt included funds to expand the army by an additional 400,000 men, bringing the total force to 1,727,000.[98]

The enlistment estimates of military planners ranged far beyond the 400,000 men added to the military machine early that fall 1941. As early as June 1940, one plan had estimated a total mobilization force of 4 million men by spring 1942, while "the victory program" formulated in September 1941 envisaged a total force of almost 9 million "to defeat our potential enemies." Realistically, even after Pearl Harbor, G-4 contemplated more modest but still substantial increases. By January 1942, the War Department estimated 3 million men would be needed as soon as possible. On January 1, 1942, a "training and mobilization plan" submitted by G-3 set the total troop strength of the army at 3,317,000 soldiers.[99]

However large the first huge mobilization program was in 1940-41, the peak had yet to come. As of June 28, 1941, the Quartermaster Corps had completed 100 defense projects and had 324 underway. By that December, the Quartermaster Corps had completed 375 separate projects, including sixty-one camps. Two hundred twenty more camps were underway, with ten camps and eighty-seven "miscellaneous troop facilities" also under construction.[100] In January 1942, a memo to George C. Marshall from then Assistant Chief of Staff Somervell still called for more. Somervell stated that the 3 million-man army would require "at least 21 new camps of 35,000 [soldiers] each."[101]

EVOLUTION OF THE 800 SERIES

Description of the 800 Series

Contemporaneous with the revisions of the 700 Series, Somervell's chief architect, George E. Bergstrom, was at work on the new 800 Series. Lieutenant Colonel Hugh J. Casey of the Construction Division stated the reasons why an 800 Series building was both necessary and better than its 700 equivalent: 1) the building was more functional; 2) it was more liveable; 3) it was structurally safer since its solid construction protected against poor grades of lumber; 4) it was better adapted to the organization of army divisions; 5) the cost per building was higher, but fewer buildings would be needed; and 6) the decrease in number of building would decrease utility costs.[102] In sum, the 800 Series was billed as a "leaner but meaner" structure.

An analysis of the new 800 Series barrack, Plan No. 800-443, illustrates Casey's points. The essential plan and shape of the barrack was unchanged; it was still two stories, with drop siding. However, unnecessary embellishments were stripped and the structural systems were strengthened. For example, Bergstrom's balloon construction provided greater rigidity than did platform construction, since the studs rose the full two stories in a single length without having to be spliced. In the previous case of platform construction, the second story was not an integral part of the structure; rather it was a separate unit fastened on top to a base. The 800 Series improved upon the design of the 700 Series in several significant ways. Studs were placed 2'-0" on center, and floor and roof construction were strengthened. Additional bracing was provided in earthquake areas. Squad rooms were larger: the exterior first-floor wall height was increased to 9'-7" from 9'-2-1/4". The second-floor exterior wall height increase was even more significant--8'-9" instead of 7'-3-1/2"--thus opening the possibility of double bunking. The posts on the first floor remained the same--6" x 6"--but for the enlarged second floor they were increased from the 4" x 4" of the 700 Series to 6" x 6". Details included heavier roofing paper, and refinements to the heating and plumbing details.[103]

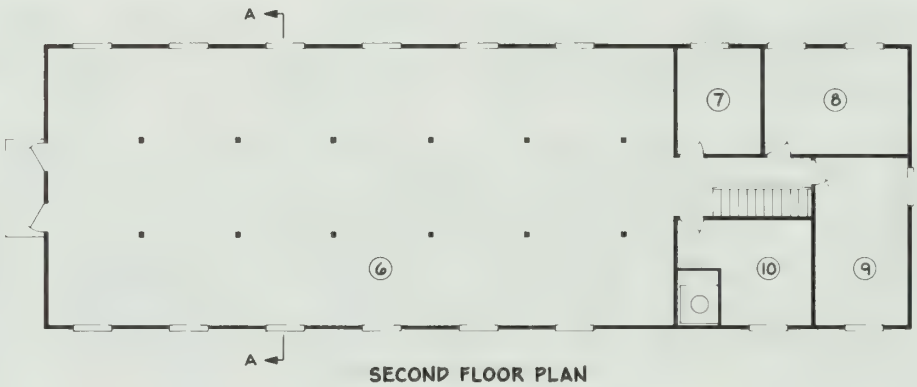
Casey's rationale that the 800 Series was better suited to the organization of army units and was more cost-efficient than the 700 Series was, in fact, spurious. Basing his conclusion on a comparison between Plan No. 700-1165 (63-man barrack) and Plan No. 800-443 (74-man barrack), Casey neglected to notice that Plan No. 700-1165 already offered both 63- and 74-man capacities, and that the 74-man unit had been approved and used. Similarly, a 63-man option was integral to Plan No. 800-443. The purported savings in number of buildings and utilities in the 800 Series had, in fact, already been achieved with the 700 Series 74-man barrack. Thus, there is no indication that the 800 Series 74-man barrack achieved any savings over the 700 Series equivalent.[104]

Reactions to the 800 Series

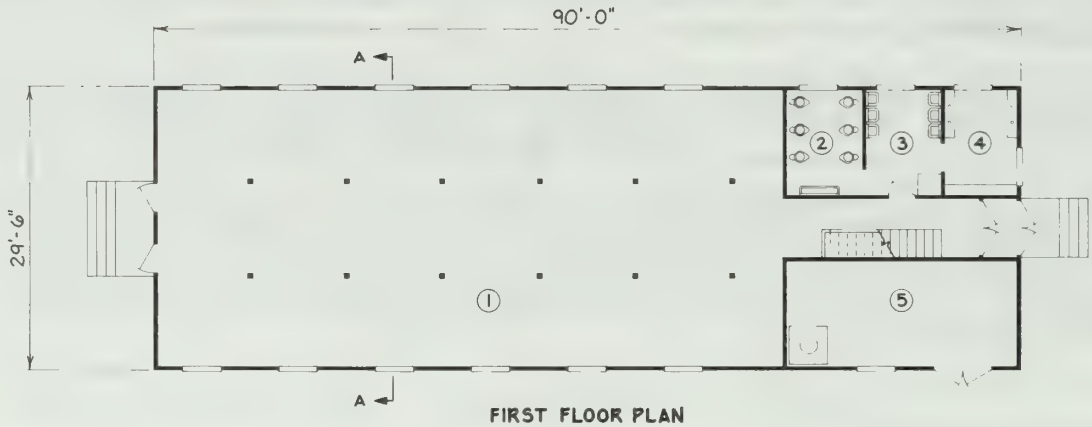
The new and improved series was not without its opponents. The strongest complaint was that the majority of the changes could have, and in some cases had, been incorporated into the 700 Series, such as the removal of the aqua medias and termite shields.[105] The 800 Series was also criticized for being too solid for the mandated "temporary" construction. While earthquake-proofing was seen by some as a sound consideration for west coast cantonments, others pejoratively termed it a "California" type.[106] Similarly, hurricane-proofing was considered to be of negligible value. While one of the draftsmen praised the structures as "excellent," as having a "longer life, sturdier, and more spacious" construction, the chief of the design section criticized the plans as having "too many long life" precautions for use in temporary

SECTION A-A

KEY
① SQUAD ROOM
② TOILET ROOM
③ WASH ROOM
④ SHOWER ROOM
⑤ HEATER ROOM
⑥ SQUAD ROOM
⑦ TWO N.C.O.
⑧ THREE N.C.O.
⑨ THREE N.C.O.
⑩ TWO N.C.O.



SECOND FLOOR PLAN



FIRST FLOOR PLAN

74 & 63 MEN BARRACKS - 800 SERIES

0 5 10 15 20 25 FEET

METERS 0 1 2 3 4 5

Figure 21 Floor plans of 74 & 63 Men Barracks - 800 Series.

Figure 22 *Elevations of 74 & 63 Men Barracks - 800 Series.*

construction."[107] Resistance to the 800 Series also came from the field. From Fort Leonard Wood, the report came that the field command preferred certain 700 Series buildings because they were more suitable for the needs of the camp and were less expensive.[108]

The Office of Production Management charged that certain specified lengths of lumber for balloon construction would be difficult to obtain in large quantities and that the odd sizes would result in excessive carpenters' labor. Somervell acquiesced and shortened some buildings' specifications, thereby decreasing the strength of a structure in areas not threatened by hurricanes or earthquakes.[109]

The reasons for the development of the controversial 800 Series remain unclear today. The creation of a series that required more and larger timbers, and was built more solidly than before, flew in the face of the conservation ethic which had permeated the construction planning effort. Some structural revisions may have been needed to ensure safety, but they could have been incorporated into the 700 Series. Similarly, the streamlining of details could also have been achieved in the 700 Series without massive revisions. What, then, was the impetus behind the 800 Series?

It may be as simple as Casey's defense that only a new series could adequately address the changing needs of the construction program. Whereas Hartman had been pushed to act quickly, Somervell had the time and clout to assemble "all the big fish from industry" including Bergstrom who, in turn, pulled in experienced architects and engineers.[110] It is plausible that Somervell's new construction team simply wanted to build higher caliber buildings.

Professional reputations and ambitions as well shaped the design process. Fine and Remington's interviews with members of the Construction Division paint a picture of a coterie of experts who wanted to utilize their expertise, or build their careers, even though the program may not have required it. Colonel Leslie R. Groves remarked that the temporary nature of the cantonments were not the sort of architecture that would make its creators proud. Similarly, the tensions among the Hartman group and the fancier Somervell team were recorded by Remington: "Bergstrom was the guiding light of the 800 Series, I gathered that the old crowd didn't think too much of Bergstrom and the great geese Somervell brought in."[111]

Use of the 800 Series

By early fall 1941, both the revised 700 Series and new 800 Series had been approved and were ready for use in the field. The inclusive "New Index of Standard Plans for Mobilization Type Buildings" came with clear directions: the plans for temporary buildings not listed had not been authorized, since they had either been revised or altogether eliminated. Moreover, the 700 Series plans were to be replaced by the corresponding 800 Series plans, except in special circumstances. For example, the 700 Series could be used when constructing extensions to existing 700 Series buildings, constructing new buildings in 700 Series type camps, or when an 800 Series plan was unsuitable or unavailable.[112] Revisions to camp layout plans show that both 700 and 800 Series buildings were used in a single camp.[113]

Thus, even before the U.S. entry into the war in December 1941, a new roster of camps were in the planning stages using the new 800 Series drawings that Casey and Bergstrom had produced. Nine sites for new camps had been approved as early as May 2, 1941, and the architect-engineers that had been selected began work on plans and specifications. Two weeks later the Adjutant General issued orders to corps area commanders to investigate sites for an additional fourteen camps; these sites were approved in the third week of July 1941. In the fall, these camps were planned and bids were advertised. Architect-engineers were also hired and contracts were signed. By July 30, the War Department reported that sixteen new

"triangular division" camps had been approved, with two more required. Additionally, it noted that four "armored division" sites and two antiaircraft sites were required and had been approved.[114]

The new camps that were approved and planned in summer and fall 1941, based upon the new 800 Series, were to be built following a different procedure than that used in previous camps. *Engineering News-Record* reported that "the modified plan results from experience gained in the original camp program, combined with the fact that more time is available for study and design."[115] Preliminary site checks confirm that these new cantonments were built using the 800 Series. As certain building types had no 800 Series equivalent, a predominantly 800 Series camp would also have a few 700 Series buildings, such as a recreation building, motor repair shop, and one or more guest houses.[116]

One of the designers of the series, Captain Christian F. Dreyer, stated in 1959 that the 800 Series was used extensively during the wartime period. Since the Construction Division had invested a great amount of time and effort into creating such drawings, the general rule seemed to be that new camps approved and planned during this time span would be based upon the 800 Series drawings.[117]

EVOLUTION OF MODIFIED THEATER OF OPERATIONS AND T.O. 700 SERIES CONSTRUCTION

The U.S. entry into the war necessitated a reorganization of construction policies. The shift in focus from a defensive war to an all-out press for victory gave munitions and combat equipment production highest priority. The rapid expansion of the army required rapid construction, but the diversion of critical materials to combat-needs production restricted the construction industry's access to building supplies. Funds, however, continued to be appropriated for additional cantonment construction and the plans approved before Pearl Harbor continued to be implemented.

However, wartime restrictions curtailed the time, money and material available to build such structures. Thus before long, the War Department ordered the Construction Division to forgo the 800 as well as the 700 Series buildings and erect instead structures which were cheaper and more temporary. By October 1942, the 800 Series had been cancelled.[118] Clearly, the exigencies of war had a great effect upon the nature of construction.

In the end, however, the Quartermaster Corps--and after the transfer, the Corps of Engineers--were able to provide all the troop housing the army needed, whatever the number was. Their progress was astounding: the total housing capacity was increased from 315,000 men in January 1941 to 2.4 million by June 1942 and 4.6 million by January 1943.[119]

Shortages and Conservation of Materials

Even before the United States became involved in the war, shortages of material influenced the evolution of the building program. Revisions to the early specifications forecasted that metals were and would continue to be scarce; hence the use of metals or galvanizing were to be greatly reduced.[120] By early 1942, it became obvious that the old construction program, whether 700 or 800 Series, would have to be revised. Within months, the predicted shortages of material turned into actual shortages. The use of substitute materials was expressly directed: shortages of copper led to the adoption of plastic screens, rubber led to asphalt or fiber filler in expansion joints and jute led to paraffin-coated cotton braid. What had been metal roof ventilators, pipes, and manhole covers were now made of wood, gypsum board, or

cement asbestos. Dispensable components such as rain spouts and gutters were eliminated. In February 1942, the Office of the Corps of Engineers listed 300 substitute materials for critical materials. A year later, the list had grown to 35 pages.[121]

By spring 1942, lumber had also become a critical material. The problem was not a lack of timber per se; instead it was the shortage of skilled labor and machinery to mill it.[122] In order to continue building the cantonments, it was necessary to alter the specifications. In May 1942, the field was thus directed to purchase all the 2" x 2" and 2" x 3" boards, tongue and groove decking, bridging, sills, timbers, plates and headers in random lengths. Moreover, they were to specify rough timbers and posts and to use one grade lower than was actually specified, except when framing. Plans were altered to accept the random widths and lengths that were available. Finally, balloon construction was to be avoided, since it required the scarce longer lengths of lumber. The next month, Bergstrom's sturdy 800 Series was cut back further; in Plan Nos. 800-120 and 800-121, 2" x 6" studs were replaced with 2" x 4"s, and every other knee brace was to be eliminated as well as those for windows and doors.[123]

Tent camps, too, were affected by war mobilization. The cost of maintenance, plus the shortage of canvas, resulted in their conversion to hutments. A hutment was created by removing the pyramidal canvas roof and replacing it with a solid sheathed roof constructed over 2" x 4" bracing. The prefabricated 16'-0" x 16'-0" wall frame remained the same.[124]

In order to compensate for the labor shortage, the army experimented with prefabricated barracks based on CCC camp designs that were easy to erect. These temporary, demountable buildings were of wood construction; even the foundation posts were wood which had been dipped in creosote as a preservative. Erected in panel units and joined by lag screws, an individual building could be completed in three hours.[125]

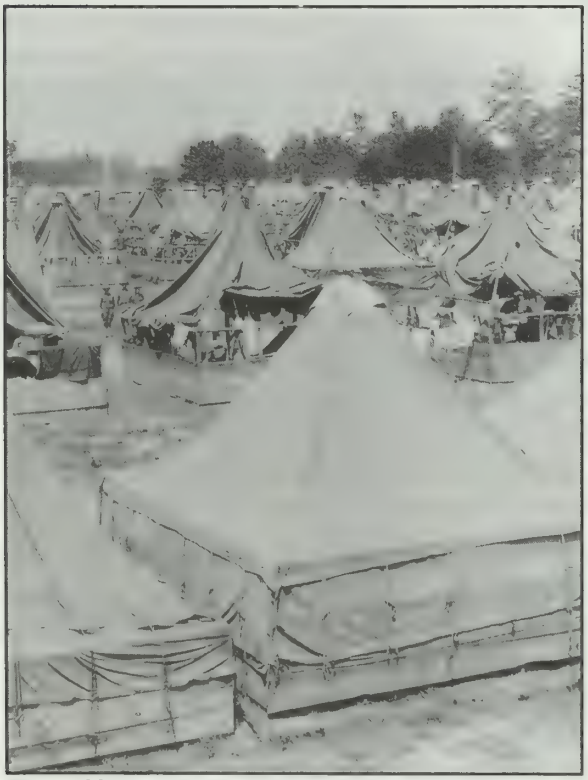


Figure 23 Tents at Camp Wheeler, Georgia, 1917.

Figure 24 Hutments at Fort Sill, Oklahoma, 1942.

Alternatives to New Construction

The army's attempts to deal with the material and labor shortages did not, however, satisfy the conflicting conservation and construction objectives. Alternatives to new construction were needed. One policy was to take control of hotels and apartment buildings and house troops therein.[126] Another was to reintroduce the idea of double bunking.

Double bunking was an idea that had been considered in 1940 and subsequently rejected. Nonetheless, by building the typical barrack on 60 square feet of floor per man with 720 cubic feet of air space per man, the Construction Division had left room open for emergency crowding. When the idea resurfaced in 1941, the Surgeon General was extremely opposed to the practice of double bunking, arguing that it significantly increased the transmission of respiratory diseases.[127] But the idea of double bunking was never completely shelved. One month after the Medical Corps' denouncement of double bunking, a quartermaster memorandum reported that both the 800 and 700 Series barracks were structurally adequate to house double the intended capacity, but that the lavatory facilities could accommodate only a 25 percent increase.[128]

Under the influence of war conditions, a study was produced in July 1942 that reexamined the possibility of double bunking. By mapping where extra bunks could be fitted, the Chief of Engineers devised a chart showing various expanded capacities for each type of barrack in use. Despite a recommendation that double bunking be limited only to the reduction of 50 square feet of floor space and 450 cubic feet of air space per man, Somervell endorsed the most extreme proposal that reduced floor space to 40 square feet and air space to 375 cubic feet per man. The results were as follows:[129]

Plan	Original Capacity	New Capacity
T.O. 11.4M	32	50
700-1165	63	91
700-1175M	45	74
700-1185	63	92
700-1185M	63	95
800-443	63	91
800-443	74	105

None of these stop-gap measures, however, provided sufficient shelter for the number of troops needed for war. Required to provide additional shelter on an emergency basis, forced to avoid certain types of lumbers, glues, canvas, and metals, the Corps of Engineers maximized construction by using a building type that did not require critical materials: the theater-of-operations.

Modified Theater-of-Operations Construction

Hitherto, theater-of-operations (T.O.) construction had been used only at the theaters of war. These structures were of the most temporary kind, essentially consisting of flimsy framing, batten and tar paper sheathing. Believing the T.O. type to be too crude for stateside troops, a modified theater-of-operations type was developed. It was in February 1942 that the T.O. construction was modified for use in the Zone of Interior and circular letters detailed the changes to be made. The following April, the "War Department Construction Policy, Zone of the Interior" ordered:

> Construction at camps, posts, and stations will be Theater of Operations type modified, or mobilization type temporary construction. Modified Theater of Operations type construction will be used for all new camps. Mobilization type temporary construction may be used in the expansion of existing posts, camps, and stations when this type of construction has been

Figure 25 Theater-of-Operations type, Camp McCoy.

previously used, and for those projects where advance planning has been completed and construction will be seriously delayed by revising the construction type.[130]

This policy was further articulated two months in June with the following directive:

In general, all construction shall be of the cheapest, temporary character with structural stability only sufficient to meet the needs of the service which the structure is intended to fulfill during the period of its contemplated war use.[131]

In light of these measures of expediency, it is not surprising that the 800 Series was cancelled by October and superceded by T.O. 11.4.[132]

In order to modify existing T.O. plans as quickly as possible, district engineers throughout the country were assigned specific plans to design. The result was a one-story structure with wood or concrete floors, whose studs and rafters were 4'-0" on center, with 15 lb. felt sheathing and magazine stoves or space heaters for heat. Latrines were in separate buildings.[133] While then Major Smith was proud of the efficiency in designing the structures, another member of the Construction Division focused on the inadequacies of the structures calling them "a sorry thing, with a safety factor of one."[134] Clearly, speed was emphasized over comfort. This position was echoed in a field report: "Having in mind that this is to be 'theatre-of-operations' type construction, from which it may be assumed that less than normal comfort in the way of facilities for the troops would be acceptable, it is my opinion that occupancy can be obtained by February 1 without the AA [almost highest priority] treatment."[135] And so T.O. structures--the most temporary form of army housing--were erected on bases across the country.

Although a Modified T.O. was the preferred building type, allowance was made for continued construction of the 700 and 800 Series. The black sheathing made T.O. housing hot in tropical climates and the flimsy construction made them unsuitable for cold climates. Colonel Groves, Chief of Engineers, permitted district engineers to use alternative plans for frigid or tropical type buildings if local climate conditions so dictated.[136]

By October 1942, the Modified T.O. type of construction had been superceded by the T.O. 700 Series. In making the change, the Chief of Engineers stated:

> Experience has shown that the original Theater of Operations drawings issued in conjunction with Technical Manual 5-283 and the Modified Theater of Operations drawings (11 point M Series) are not sufficiently flexible for use over the entire United States, nor have the designs been completely satisfactory in utilizing presently available construction materials.[137]

Description of the T.O. 700 Series and the "New" 700 Series

The new 32-man standard T.O. 700-5500 barrack replaced the 700-1165, 700-1165M, 700-1185, 700-1185M, 700-1100, 700-1150, 700-1443, 800-443, 800-437, T.O. 11.4 and T.O. 11.4.M. *See Appendix.* Twenty feet wide and 100' long, the barrack was similar to its Modified T.O. predecessor. It was still built with framing 4'-0" on center, but its structural weaknesses were bolstered by additional bracing. The greatest difference appears to be the increased comfort the new series provided. Buildings were better insulated and ventilated. The tar-paper and batten siding of the T.O. 11.4 was augmented by options to use horizontal siding, vertical siding, cement asbestos shingles, exterior type plywood, and a variety of treated wall boards. Interiors were equipped with modest amenities such as coat racks and shelves. These structures, too, were candidates for double-bunking, and plans were specifically prepared showing different bunk layouts for various capacities. As in the earlier series, the T.O. 700 Series was based on a set of stock standardized plans. Thus, the elements of the T.O. 700-5500 barrack could be found in other building types of the same series.

At the same time, the 700 Series was again revised. The "new" 700 Series was coded by a four-digit suffix, rather than the three-digit prefix of the past. These buildings, classified as "mobilization and WAAC Buildings and Facilities" were designed to eliminate the duplication that had occurred among the 700 and 800 Series by superceding both. The new 700 Series plans specifically copied the "economical" 700 Series framing where it was "feasible and advantageous," while retaining the floor layouts of the 800 Series.[138] The plans were not intended to compete with the T.O. 700 Series and thus did not duplicate building types provided in the T.O. 700 Series.

Camp layouts were also revised. For example a triangular division, once built around seventy-nine companies of four, 74-man barracks of the 800-443 drawings, were now based on ninety-one companies in fifteen, 32-man units of the T.O. 700-5500 drawings. Floors were of wood construction except in dry regions where concrete and tile on grade was used. Millwork was of standard design. Overhanging eaves were eliminated as standard practice. And the usual conservation measures such as the use of metal substitutes were applied. Like previous temporary buildings, these structures were still quite minimal. An Inspector General report complained that "as designed that unit is little more than self-supporting as to superstructure, being incapable of resisting snow and wind loads of more than moderate intensity."[139]

BUILDING COMPONENTS

Aqua Medias

Aqua medias were noticeable features of the 700 Series cantonments. Alternately called canopies, rain hoods, pents, or eyebrows, the aqua medias over the windows elicited the attention of the construction industry press. An article, accompanied by photographic illustrations, noted:

> The 1940 barracks have adopted a tropical item known as "aquamedias" which, in simple terms, is a skirt over the first floor windows which permits them to be left open during rainstorms without getting the cots wet.[140]

The explanation that the aqua medias protected the cots inside the barracks during rain was reported in numerous articles.[141] A captain in the design section later recalled that the aqua medias actually served a two-fold purpose: 1) to allow better ventilation during rain without getting the cots wet; and 2) to keep the sides of the buildings and windows from excessive weathering and rotting.[142]

Aqua medias fell into disfavor, however, by 1941. Apparently the type of aqua media that was inserted into the slot between the first and second floors was prone to water seepage. Oakum, a caulking substitute, had been used with questionable success in sealing the cracks. A March 1941 memorandum tersely stated:

> Media aqua details have been revised to avoid look-outs [the supporting rafters] being framed through the siding and sheathing. . . .The subject of the media aqua is now under discussion and no decision has been rendered as yet.[143]

A study by the architectural reviewing committee concluded that the aqua medias were generally superfluous except "in localities where periodically heavy rains are prevalent, such the Panama or other tropical area." Furthermore, the installation of these redundant sun and rain shades required extra bracing and special cutting and fitting of sheathing and siding around the supporting members. Not only might these leak, but the extra detail delayed construction and added cost. Estimating future construction for an additional 804,760 men, the committee concluded that $6,259,260 could be saved by eliminating the aqua medias over the windows on the long walls and gable ends.[144] Bergstrom subsequently ordered the aqua medias to be omitted on "buildings of the new program [800 Series] and on the buildings of the present program [700 Series] that have not been started."[145] Aqua medias were also eliminated on the T.O. 700 Series and subsequent 700 Series. General Dreyer later reported that removal of the aqua medias from standard plans had been a mistake, despite the structural superiority of the 800 Series.[146] *[See Drawings: 700-1167.]*

Chimneys

The most common 700 Series chimney was the external chimney which was placed four feet from the building, with a brick base, and metal stack supported by guy wires. The 800 Series integrated the chimney within the building core, and the chimney became an internal stack, although external chimneys also continued to be built in the 800 Series.[147] The *Repairs and Utilities 1939-1945 History* provided instructions for replacements of outside and inside stacks.[148] Chimney specifications required that they be designed for wind pressures of 15 pounds per square foot on the projected area with tension not to exceed 20 pounds per square inch in the straight brickwork.[149] *[See Drawings 800-145, 6150-12-B].*

Fire Egress and Hazards

Although barracks were structurally minimalist, and members of the Design Section believed safety to be of lowest priority, the subject of fire egress received a modicum of attention. Second-story fire exits

consisted of a balcony, usually at the gable end opposite the heater room, with three railed-in sides. The unenclosed side opened to a ladder which was nailed to the wall.

The industry press made note of the fire exits in the articles on cantonment building, perhaps to minimize potential fears that the wooden city might be a fire trap. In early 1941, the fire exits were reviewed for sufficiency, and it was recommended that the ladder rungs be inserted into the ladder string, rather than merely joined with nails. A request for a review of the safety of the open balcony resulted in a hinged guard rail being installed.[150]

The barracks' heating rooms were redesigned in September 1941. The essence of the directive was that no part of any furnace, plenum, or smoke pipe should be within 6 inches of any fire-retardant wall or ceiling surface, or within 18 inches of any unprotected wall or ceiling. Three methods of remedying unsatisfactory heating room installations in temporary barracks were suggested: 1) lowering the furnace or plenum chamber; 2) installing asbestos baffle board along furnace and duct; or 3) removing the ceiling or wall, notching out the joists, and installing asbestos baffle board.[151]

Even after the decision was made to use T.O. 700 Series construction, with stove heat and one-story buildings, fire ladders were still attached to exterior walls. As will be noted below in greater detail, WAC housing, even of the Modified T.O. or latest 700 Series type, was provided with fire escape staircases rather than ladders.

***Figure 26** 800 Series barrack with fire exit at rear.*

***Figure 27** Detail of aqua medias.*

Flooring

As the first division within the armed services to mobilize, the Air Corps was unfortunately subjected to the trials and errors of the mobilization construction program's first application. In February 1940, the Air Corps reported that, despite using correctly dried lumber, the floors contracted excessively. Shrinkage was attributed to the drying effect of the furnace heat. To rectify the situation, a double floor was used, with building paper laid between the subfloor and the finished floor.[152] Apparently there was a delay in integrating expertise with action. In 1941, the Air Corps continued to experience flooring problems, this time with gaps in the second floor.[153] The policy of using double flooring, with sheathing in between, was used in cantonment construction and was subsequently codified in *The Engineering Manual.*[154]

The Repairs and Utilities 1939-1945 History expounds upon the problems that floors presented and notes that Repairs and Utilities was responsible for remedying such problems. The history noted that the shortage of lumber combined with the speed of construction during 1941-43 resulted in the use of lower-grade wood and poor workmanship in general. By 1942, the floors suffered 1/4" wide cracks, raised grain, splintered woods and segments torn out, and uneven joints. Consequently, the engineers devised a substitute floor system of a felt-backed floor covering over a plywood underlay.[155]

Structurally, as well as in finishing, cantonment flooring was open to revision. Bergstrom's initial plans for the 800 Series included 3" x 14" beams for many floors. The Board of Review suggested that 2" x 12"s be substituted since these were more readily available. Dreyer opposed the change, in part on the grounds that it would require 15 percent more in board feet of lumber. Bergstrom elected to go with the 2" x 12" size, pencilling in the margin of Dreyer's report that "standard sizes readily available are to be preferred & every effort for standardization encouraged."[156]

Figure 28 *700 Series barrack with external chimney.*

One of the greatest differences between the original T.O. buildings and Modified T.O. buildings was the addition of floors. Rather than sitting on dirt, the Modified T.O. barrack was raised on a wood or, in arid climates, concrete floor. The T.O. 700 Series included provisions for both types of floors in separate drawings, as well as modifications to the structural plans to accommodate the differences.

Foundations

The standardized plans prepared by the Construction Division began from the sill up. The foundation work was the responsibility of the constructing quartermaster working in conjunction with his contractors. Since the topography of each site was different, it was impossible to devise a standard foundation plan. Nonetheless, certain guidelines were specified. For example, the wood foundations of World War I gave way to concrete block or masonry footings. Later, this was changed to poured concrete in order to accommodate inside lavatories and central heating facilities, which required concrete slab foundations.[157]

Heating and Ventilation

Central heating of the barracks exemplified the technological progress that had been made since the 600 Series was developed. Remembering a World War I barrack, an old soldier recalled: "The method of heating was a hot-air furnace in the middle of the room. If you were not near the heater it was hard to keep warm."[158] By World War II, however, central air was standard for barracks and other small army buildings.[159] *The Military Engineer* explained how the system worked:

> The type of heating unit installed is adjustable to the available local fuel, whether it be anthracite or bituminous coal, oil or gas. The hot air heaters employ circulatory fans for distributing the heat through over-head metal ducts with dampers to regulate the flow being set on all lateral ducts. For heating systems employing coal, coal boxes are provided in the rear of the building directly behind the heater room.[160]

Despite optimistic expectations (even Holabird and Root endorsed the idea), the heating system proved to be highly ineffective.[161] During the first winter of mobilization in 1941, complaints about the heating system, from both soldier and commander alike, were received from the field. The self-adjusting thermostats were either flawed or improperly set; the result was that the barracks were constantly being overheated. Reports from the field suggested that the temperature control system be fine-tuned, or else the mechanism be made tamper-proof.[162]

***Figure 29** View of boiler.*

In the summertime, overheating was also a problem. Screens were expressly used to permit open windows and the second floor of the barracks had screened ventilators punched in the ceilings. The problem of overheating was particularly acute in the black tar-papered Modified T.O. buildings. Steps were taken to correct the conditions in officer and cadet barracks by adding gable-end louvers and roof ventilators.[163] The record is silent, however, on the plight of the common soldier.

Like other aspects of building construction during wartime, heating systems were affected by the scarcity of critical building materials. Thus, metal duct work was changed to pressed wood and asbestos boards; copper convectors were replaced by cast-iron radiators; and steel high-pressure boilers were changed to low-pressure ones. With the transition to Modified T.O.

construction, space heaters were used for all but the largest buildings and hospitals.[164] Similarly, the T.O. 700 Series barracks had stove heaters. Barracks in warmer zones had one or two heaters whereas barracks in colder zones had up to six as well as having greater insulation.

Insulation and Winterizing

The basic barrack for temperate zones consisted of framed studs covered with diagonally laid 1" wood sheathing, covered with building paper and drop siding. The sheathing paper improved thermal insulation and weather protection and acted as a vapor barrier. In some cases, instead of wooden sheathing, gypsum board with an exterior facing of black waterproof paper was used. The gypsum board formed a tighter seal than the 1" sheathing boards and the waterproof facing adequately replaced the sheathing paper. The drop siding could be nailed directly to the wall sheathing.[165] The interiors of the temperate zone barracks, however, were not finished and there was no insulation in the walls, floors, or ceilings.

In colder zones, provisions were made for greater insulation. These included lining the inside face of exterior wall and ceilings with Celotex; covering the walls with a 4'-0" high wood wainscot; constructing a storm vestibule on all entrance doors except heater room doors; and installing a storm sash on each window.[166] A 1941 Air Corps request for additional winterizing was turned down for the following reason:

> Construction authorized in the -20 degrees zone was designed for low temperatures and the buildings were specially sealed in accordance with economy and period of contemplated occupancy. Attention is invited to the fact that all heated buildings in the -20 degrees zone have sealed interiors.[167]

In January 1942, new plans were approved for "storm entrance shelters" for the 700 Series barrack, 800 Series barrack, and prison-type barrack. An alternate plan for an interior vestibule for the 800 Series barrack was rejected.[168]

Figure 30 View of insulation.

Painting

The original plan of cantonments had left the wood siding unpainted.[169] In October 1940, after failing to persuade the Chief of Engineering that cantonments should be painted, the Painting and Decorating Contractors of America (PDCA) directed their lobbying efforts toward H.W. Harrison and the Advisory Commission to the Council of Nations (NDAC).[170] Protesting the omission of painting from cantonment specifications, the PDCA pleaded:

> It is the painting that makes it habitable, gives it appearance and beauty, makes it sanitary for occupancy, prevents insects and termites from attacking it, and, to a degree, adds fireproofing qualities. Painting also makes a building damp-proof. Buildings that are painted keep up the morale of our boys, add cheer and sometimes prevent despondency. It will be a forlorn contrast for our boys to be brought from their painted and decorated homes and offices to Government buildings that are neither protected nor beautified with paint. Buildings are drab, dreary and unlivable unless they are painted, to say nothing of the protective value that paint adds. . . It is no economy to the Government to omit the painting on these temporary buildings. For generations paint has been the acceptable protective coating on buildings to withstand the elements.[171]

Within the month, the War Department had reviewed the matter and issued a directive that the exteriors of all mobilization buildings were to be painted a "standard ivory color, with doors of warm gray."[172]

The fact that only exteriors and not interiors (except for hospitals and mess halls which were painted for sanitary reasons) were painted suggests that the War Department believed paint to be of protective rather than aesthetic value. Yet, army documents reveal that the War Department, in consultation with the Forest Products Laboratory, determined that deferring painting maintenance would not, in fact impair the life of the building. Thus, it is possible to assume that paint was more than a protective device; it had, as PDCA suggested, an aesthetic dimension that in the context of army housing might serve to boost morale.[173]

Plumbing

A major change that took place in barrack design between the 600 Series barrack of World War I and the 700 Series barrack of World War II was an improvement in indoor plumbing.[174] Reflecting an increased standard of living by World War II, lavatories were designed to be placed inside the barracks although early plans are unclear whether this was the general policy. An early plan for toilet facilities stated:

> A closed pit latrine, slightly enlarged to accommodate a stove for heating and provided with ventilation so as to avoid their becoming too obnoxious, is being planned. A method for heating water in the showers has been developed.[175]

Lavatories were subsequently integrated with the barracks unit, but a diagram comparing tent camp to cantonment layout notes that the latrines were to remain if facilities were not provided in barracks.[176] Air Corps barracks had the first internal lavatories which, along with the heating plant, were placed on a concrete slab on grade instead of on a frame floor. This reduced the risk of fire, rotting, and freezing of plumbing pipes below the floor.[177] This system was adopted for subsequent barracks lavatory construction.

Once the decision was made to move the plumbing indoors, the only question was how far to take this convenience. Army records are full of requests for additional toilet facilities in buildings. Eventually, plumbing facilities were introduced into all occupied buildings.[178] Toilet facilities in the barracks generally consisted of urinal troughs and closet bowls without partitions, and wash basins. Gang showers in the 63-man barrack had four shower heads (up from three originally) and the 74-man barrack had six. Duck boards were added later, as were shallow pans for athlete's foot disinfectant. The drying area had benches for dressing, a drinking fountain, and a slop sink. Windows had opaque glass.[179]

Standard plumbing fixtures became an essential feature of army housing by World War II. And when steel, copper, and brass became scarce during wartime, substitutes were used: vitreous china replaced steel; hardboard and cement asbestos showers replaced tubs; and cast iron and plastics replaced brass fittings.[180] Finally, when the shortages of materials led to the adoption of the T.O. 700 Series, lavatories and bath houses were moved back outside to separate buildings. [*See Drawings 700-241, 700-1170, 800-157, 800-194, 800-207, 800-446, 800-513, 800-850.*]

Figure 31 Sinks and toilets.

Figure 32 Urinals and wash tub.

Roofing

Structurally, the roofs of the 700 and 800 Series were adequate until the United States entered the war. The diversion of materials crucial to the war effort, such as steel, necessitated all timber roofing, even on long-span auditoriums or hangars, where steel trusses had been used before. The high demand for lumber had the effect of further weakening the roofing, as the minimum grades of lumbers were continually downgraded to accommodate the increasing demand upon limited supplies. *The Engineering Manual*, noting the reduction in quality of lumber, required that 1450 pound stress lumber be used where 1200 pound was usual. In addition, it required that bolted roof connections be used to strengthen the system. Barrack roofs were designed for a wind load of 10 pounds per square foot on the vertical projection. For theaters and other large roofs, the load was increased to 20 pounds. Allowance was also made for hurricane precautions, as developed by the local builders.[181]

Due to the lack of knowledge in the use and care of unseasoned and ungraded lumber, particularly in trusses, trouble developed after a year. By 1943, shrinkage of unseasoned lumber caused connector bolts to loosen. Consequently, joint strength was weakened and trusses sagged. Either through carelessness or shortage, steel split-ring timber connectors were occasionally omitted and grooves for the connectors and bolt holes were improperly cut and located. Rather than re-roofing structures, stop-gap methods of roof repair were undertaken unless severe conditions were present.[182]

As with the flooring situation, Air Corps construction first exhibited the weaknesses of the roofing plans. And indeed the flaws were severe--the roofs leaked and they collapsed. The Sturgis Papers document how an Air Corps roof leaked just six weeks after erection.[183] More dramatically, a 1,000-man theater roof at Fort Benning, Georgia collapsed minutes prior to the opening of the building.[184]

Like other components in mobilization construction, roofs were subjected to minimal standards. War Department reviews of accidents like those mentioned above concluded that roof failure could be attributed to three basic causes: 1) improper application of roofing material due to poor workmanship resulting from haste or poor protection of materials; 2) the use of unsuitable roofing materials, such as unseasoned sheathing or too-light roofing paper; or 3) damage by strong winds.[185]

The solution was to refigure stresses and to redefine the specifications. In October 1940, the Construction Division switched its roofing material from the less expensive black roofing paper to the red or green SSR 521 Federal Specification Roofing. The new roofing material was 25 pounds heavier than the black paper, with a life expectancy of five to seven years. Although the cost was $0.60 greater per square foot installed, the improvement in performance warranted the switch. Even heavier roofing was used for the 800 Series.[186]

The roofing was rolled horizontally with side laps of not less than 2" and end laps no less than 4". The roofing was doubled over the ridge, and it was turned up at least 6" under the eaves and aqua medias.[187]

Siding

In June 1940, there was still some question about the siding material to be used on the cantonments. Wood drop siding had been used previously and the Construction Division recommended that its use be continued. However, it also considered using prepared roofing paper for wall sheathing which was cheaper to procure and could be installed with unskilled labor.[188] This minimalist approach was not implemented, however, until the advent of the Modified T.O. construction.

Although wood drop siding was preferred for cantonment buildings, steel siding on cantonment buildings was also used experimentally.[189] Not to be confused with a steel prefab, a steel-sided building was timber framed. Stud spacing was reduced from 3'-0" to 2'-0", diagonal bracing was added for stiffness, and 1/2" fiber board was placed between the studs and siding. The 26-gauge, galvanized steel siding was rolled in 2'-0" x 10'-0" sheets and pressed to resemble clapboards. To insure that the buildings would match the rest of the cantonment, the steel sheets were zinc coated, and then roller coated with a baked on "zinc dust-zinc oxide primer." This served as a base coat which would accept the field paint applied after erection.[190]

Developed just prior to Pearl Harbor, there is no indication that wood siding was used after. Rather, the short-lived experiment's significance to the overall study of cantonment construction is its illustration of how important the "cantonment look" was to the design section. As in the case of steel prefabs, the "wooden" shape and detailing of a barrack was not inherent in a steel design. The only reason to press "clapboards" in the steel was to fit the aesthetic template which the designers used.[191]

Similarly, the decision to use cement-asbestos shingles also reflected a desire to achieve the domestic look and feel of the drop-sided barracks. The specifications directed that the shingles be a wood grain texture and that they be painted. Shingles were only to be used upon the approval of the Office of the Quartermaster General.[192]

The Modified T.O. buildings were sided with 15 lb. felt and batten construction. The improved T.O. 700 Series offered a greater variety of sidings which, while including the felt board and batten option, also allowed for more traditional finishes such as horizontal siding.

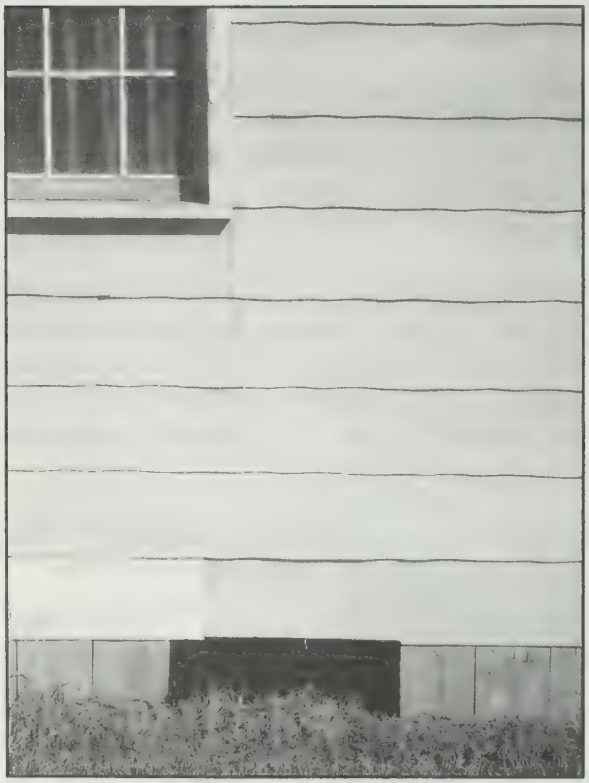


Figure 33 Detail of cement-asbestos shingle siding.

Termite Shields

Termites were a major threat to an all-wood cantonment. Thus, the concrete or masonry piers on which the wooden sill rested were capped by a sheet of galvanized metal with downward crimped edges. In theory, termites which crawled up the pier would be unable to navigate upside down and around the metal plate separating the pier from the wood building. As zinc became scarce, galvanized metal was replaced by painted metal.

The architectural reviewing committee determined in 1941 that termite shields were neither cost- nor termite-effective. The incorrect installation of the shields further minimized their efficacy. Thus, the committee recommended that the termite shields be omitted from construction plans. If the shields had been left off, it was estimated that $3 million could have been saved in the 1940 construction program. The committee recommended that the shields be used only on temporary structures which might be preserved over the five-year period.[193] Two weeks later, the

field was directed "to omit termite protection . . . on buildings of the new program [800 Series] and on the buildings of the present program [700 Series] that have not been started."[194] It is therefore likely that many buildings of the 700 Series were constructed without aqua medias or termite shields.

Nonetheless, precautions were still taken to inhibit termite infestation. The solution found was clearly detailed in an article on camp construction:

> The termite shields that were so noticeable on buildings constructed in the earlier camps are conspicuous by their absence from this design. Experience has shown that the best preventatives of termite damage are a thoroughly clean earth surface under the building, a distance of at least 8 in. between the earth and the nearest wood, and good ventilation throughout the space beneath the floor, with ample provision for periodic inspection of this space. It was therefore decided to omit the termite shield in this design and provide the proper number and spacing of vents and crawl holes in the exterior wall. This resulted in a further savings in construction costs and, as the termite shields had been galvanized iron, a saving of critical material.[195]

The change in policy towards termite shields had repercussions for the construction of skirting. The skirting had originally been hung around the perimeter of the sill "with a view to order and appearance." Ship lap skirting was used in the 20 degrees zone and vertical random-width boards were used in the 0 and -20 degrees zones.[196] Skirts for buildings with no termite shields had the openings cut in the skirting for observation and ventilation. [*See Drawing 700-1163*].

Windows

Whether in the standard wood barracks or experimental prefab barracks, the windows were of multiple-pane construction, usually six-over-six-light or eight-over-eight light double-hung wooden sash. Some windows were of steel construction, typically casement or pivoted. The use of the multiple-light style continued the window treatment of the 600 Series, and was retained through all the revisions to the 700, 800, Modified T.O., and T.O. 700 Series, although the 800 Series and its successors' lights were reduced from 10" x 12" to 9" x 12". Reducing the size of the window panes, however, sometimes required different studding around the openings. In the interest of "livability and comfort" the windows were fully screened. When metals became critical commodities, the steel sashes were phased out and copper screens were replaced with plastic screens. [*See Drawing 800-151*].

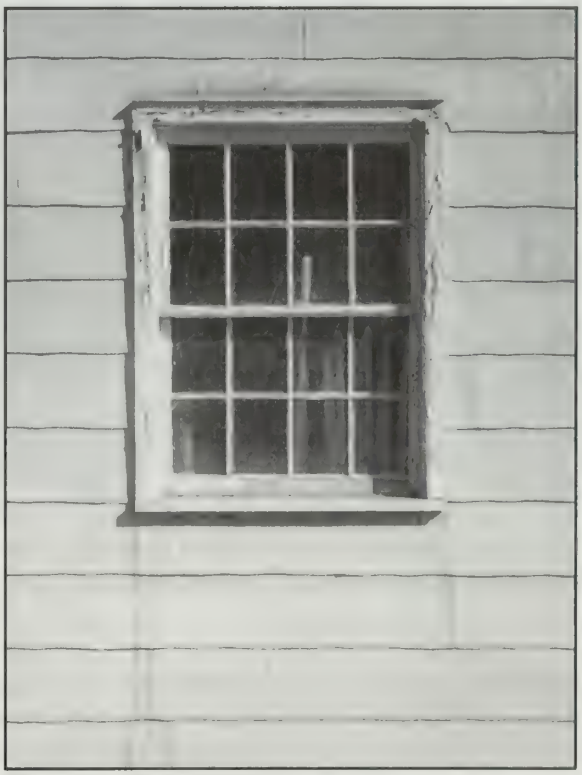


Figure 34 *Window detail.*

Figure 35 Historic view of 700 Series cantonments.

CONCLUSION

In little more than three years, the temporary mobilization construction program designed and erected army cantonments which provided facilities for over 5 million soldiers. As a top engineering officer declared in March 1942, "We must win the battle of materials just as surely as General MacArthur must win the battle of the South Pacific. Ours here at home will also be a tough battle."[197] Despite start-up problems and occasional errors in design judgement, the temporary mobilization construction program met the wartime challenge and even initiated techniques that would become standard in the post-war years.

In a mobilization program unprecedented in American history, the two construction branches of the army successfully accommodated every new quota of troop housing assigned them. Belying the charge that isolationist sentiment kept the nation unprepared for war, the Construction Division of the Quartermaster Corps and the Corps of Engineers had completed facilities to house, feed, and supply a million and a half troops by the time of Pearl Harbor--an increase in the troop housing capacity of 1,200,000 men in the preceding year and a half.

Contemporary criticisms that the program was bogged down by supply and weather delays, seemingly damning at the time, have proven inconsequential. The cantonments, after all, were built and used to house troops with a degree of health and comfort unknown to U.S. troops in previous wars. Far more relevant criticism of the construction program would be that the structures were over-designed if the primary objective were to erect temporary structures. The tendency to over-design was most pronounced in the 800 Series. As demonstrated above, whatever advantages the 800 Series buildings offered--a 74-man barracks, savings in the elimination of aqua medias and termite shields--had been simultaneously incorporated into the 700 Series. What the 800 Series buildings offered was sturdier, more enduring and thus more costly features of construction. In light of the growing material shortages of the early 1940s, the decision to use the 800 Series seems misguided, unless the objective was to build better buildings in order to provide better housing.

It is vital to remember that both the 700 and 800 Series were developed before the country went to war. Thus the army's designs were not tightly strictured by the material and financial shortages which characterized the war years. As demonstrated earlier, the one and only mobilization plan the army had when it suddenly faced the crisis of 1940, the Protective Mobilization Plan, turned out to be worthless in regard to housing. Subsequent mobilization plans of the 700 and 800 Series allowed for some of the comforts of home. Within months of entering the war, army planners realized that expediency must rule and thus began the shift towards the less comfortable but more cost- and time-efficient theater of operations type structures.

Although the cantonments were designed and constructed to meet the demands of expediency, they were also able to incorporate technological improvements that had become standard by the early 1940s. Like many American homes, the barracks included indoor plumbing, and central, forced-air heating. And by the 1930s electricity was no longer considered a luxury but a standard utility, a belief that was reflected in the work of the New Deal's Rural Electrification Administration, which was created to bring electricity to most rural homes. The soldiers, consequently, would be able to light their barracks with the flick of a switch. A professional army with long-term soldiers could perhaps operate by different, military standards. But these boys were citizen soldiers. They would do their stint of service and then return to civilian life when the crisis was over. In their bases they would get the basic comforts that many if not most Americans were used to, no more and no less.

The same expectation applied not only to barracks but to the cantonments altogether. Not only would the army make every attempt to give the boys the comforts of home, but would invest precious time and money to make the camps look like home. The millions of dollars spent to paint the buildings could be justified, as noted above, on the grounds of preservation. For buildings that were meant to last only a few years, the preservation argument seemed illogical. An equally important reason was morale. The painting lobby struck a sensitive nerve when it argued that ". . . it will be a forlorn contrast for our boys to be brought from their painted and decorated homes to government buildings that are neither protected nor beautified with paint."[198] Similarly, the construction division did not need to design a chapel. Considerable time and expense could have been saved by using the recreation halls. Yet the army, on Eleanor Roosevelt's urging, calculated that it made a big difference to soldier morale. Thus, the Construction Division built a church that looked like a church, with a steeple and a cross, with pews and a lectern and an altar rail. From the outside, the 700 Series chapel would have not looked out of place in a New England village. Never mind the fact that not too many of the soldiers came from areas without quaint churches, fresh paint jobs, forced-air heating or even indoor plumbing. The army supplied them with these things because they were what American citizens by 1940 were supposed to have.

But in meeting the goal of a high standard of living, the army simultaneously endangered the objective of impermanence. Ironically, both the 700 and 800 Series failed to meet their temporary expectations--buildings of both series still stand today. The costlier 800 Series has weathered the years better, thus supporting complaints of the 1940s that it was overdesigned for its purpose. That both series continue to exist is testimony to the soundness of the architectural design, if not the decision to approve the designs. However, one must remember that at the time these series were developed, a time of haste and uncertainty, it was believed that a wooden building would inevitably be temporary. Indeed, the military still considers wooden structures temporary.

These structures represented a building technology that would soon sweep the country. Standardized plans, prefabrication of units, specialized construction crews accomplishing only one aspect of construction: in the push for speed in the mobilization construction a variety of construction techniques were developed that would soon have mass application. It remained for large developers after the war (and defense housing contractors during the war) to take these techniques developed by military contractors and apply them to the civilian construction industry. Millions of veterans would soon return home with the expectation that they too would be able to achieve the American dream, constituted primarily by home ownership. And, with help from the G.I. Bill, many of them would purchase a home in the new suburban developments springing up all over the country that were built in a similar manner to their old army barracks. If nothing else, the pressure of mobilization helped give birth to a mass construction industry that would shape the character of American life in the postwar period.

NOTES:

1. Lenore Fine and Jesse Remington, The Corps of Engineers: Construction in the United States, The U.S. Army in World War II Series, Washington, D.C.: Office of the Chief of Military History, U.S. Army. 1972, 111-112. (Hereafter cited as Fine and Remington). Alice Rose, Military Construction in the United States Under the Direction of the Quartermaster Corps and the Corps of Engineers, 238, Office of History, U.S. Army Corps of Engineers, Fort Belvoir, Virginia, Box VII-24, (The manuscript is hereafter referred to as Rose, and the archives as the Fort Belvoir Office of History). John J. O'Brien to Commanding General, Army Service Forces, "Overall Housing Capacity," November 15, 1944, Washington National Records Center, Record Group 77 - Entry 107 - Box 784. (For the full title of Record Groups used in this study, see the Bibliography.)

2. Corps of Engineers, Housing Support Center -- Environmental Resources, Information Paper 27, June, 1985. Department of the Army, "Policy on the Disposal of World War II Temporary Buildings," February 27, 1984, Fort Belvoir Office of History, Box V-7.

3. Drawing Index, "Mobilization Buildings and Facilities, obsolete," January 26, 1943, Washington National Records Center, RG 77 - Entry 106 - Box 746. DAEN-ZCF-B, Information Paper, June 27, 1985. Jesse Remington and Lenore Fine, "Engineering for Command Construction," Drafts, Fort Belvoir Office of History, Box VII-35. (Hereafter referred to as "Fine and Remington Draft").

4. Fine and Remington, 68, 96. Memorandum, Col. Pitz to Paul Baade, Assistant Chief of Staff, [Untitled], November 19, 1936, Washington National Records Center, RG 92 - Entry 1890 - Box 725.

5. Louis Johnson, Under-Secretary of War, to Rep. Ross Collins, August 9, 1939, Fort Belvoir Office of History, Box VII-4. George Tyner, Assistant Chief of Staff, to QMG and Adjutant General, "Plans and specifications for cantonment construction," November 20, 1939, Office of History, Box VII-4. Fine and Remington Draft, 3-6.

6. G-4 was a branch of the army's policy-making authority, the army General Staff in Washington. The General Staff was headed, of course, by the Chief of Staff, and had five sections, each a source of assistance in helping him govern the administration of the army. G-4 was the section concerned with supply, construction, and transportation. Other sections were G-1, personnel and administration; G-2, intelligence; G-3, operations and training; and the Assistant Chief of Staff, war plans and Division for War Planning. See Truman Committee Hearings, Part I, p. 237-238.

7. Fine and Remington, 68-69, 71.

8. Fine and Remington, 68-69, 71,73,95. Special Senate Committee, Investigation of the National Defense Program, 77th Cong., 1st sess., 1941, Part 7, 2021, 2040-2041, 239-240. (Hereafter cited as "Truman Committee Hearings").

9. The reason it seems that the army did not house these new troops in tents, as one would expect with the Protective Mobilization Plan, is that this was not a war mobilization effort. There was no European "front," where these troops would be sent to soon after mobilization. Thus, these troops, as would become the general rule, had to be housed indefinitely in the domestic United States. Hence they were billeted in "temporary" wood structures, designed to last for the duration of the emergency period, because the American public believed that a war period was an aberration and therefore temporary.

10. The early cantonments included Fort Benning, Georgia; Camp Ord, California; Fort Knox, Tennessee; Camp Jackson, South Carolina; Fort Dix, New Jersey; Camp Custer, Michigan; Fort Edwards, Massachusetts; Camp Blanding, Florida; Camp Shelby, Mississippi; Camp Robinson; Camp Claiborne, Louisiana; San Louis Obispo, California; Camp Forrest; Camp George Meade, Maryland; Indiantown Gap, Pennsylvania.

11. Rose, 328-329. George Tyner, Assistant Chief of Staff, "Establishment of a basis for revision of the construction program," November 4, 1939, Fort Belvoir Office of History, Box VII-4. Disposition Slip, G-4, "Temporary construction with increase in army to 227,000," November 20, 1939, Office of History, Box VII-4. Fine and Remington, 103, 108, 116.

12. Fine and Remington, 111-113. Truman Committee Hearings, Part 1, 246-247.

13. Truman Committee Hearings, Part 1, 239-240, 243, 247-248. Rose, 331-334.

14. Fine and Remington, Notes of interview with General Gregory, June 29, 1955, Fort Belvoir Office of History, Box VII-36A. Brehon Somervell, "The Temporary Emergency Construction Program," The Constructor 23 (July 1941): 73.

15. House Committee on Military Affairs, 77th Congress, 1st Sess., Hearings, Inquiry as to National Defense Construction, Part I, 107. (Hereafter cited as "House Committee Hearings.") Office of the Adjutant General, Record of Communication Received, from Sen. Tom Connally to War Department, January 24, 1943, National Archives, RG 407 - Entry 363 - Box 4451 (Camp McCoy). Senator Alex Wiley to General E.S. Adams, August 28, 1940, National Archives, RG 407 - Entry 363 - Box 4451 (Camp McCoy).

16. Legislation quoted in Rose, 336-337. Truman Committee Hearings, Part I, 244. Roosevelt quoted in Fine and Remington, 162.

17. On 800 Series, see Col. Leavey, Chief, Engineering Section, to Major Casey, Chief, Design Section, "Standard specification for temporary housing," July 14, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729. Also see Fine and Remington, 351.

18. Fine and Remington, Questions for Hartman and replies, Fort Belvoir Office of History, Box VII-37. Truman Committee Hearings, Part 7, 2042. Fine and Remington, 115. Nobody could determine at the time what happened to the 700 Series plans, and of course the answer is even more elusive after almost 50 years. Perhaps the most accurate speculation is that of Mrs. Pagan, who served as Hartman's secretary for a number of decades. According to her, General Seaman, who had a reputation as something of a heavy drinker, could have destroyed the plans, "especially if he'd had one too many." In addition, Mrs. Pagan mentioned that General R.C. Moore of the General Staff might also have been responsible. See Interview, Fine and Remington with Mrs. Pagan, March 8, 1957, Fort Belvoir Office of History, Box VII-36B.

19. George Tyner, Assistant Chief of Staff, to Adjutant General, "Construction of temporary tent camp at Fort Sam Houston, Texas," September 20, 1939, Fort Belvoir Office of History, Box VII-4. Fine and Remington, Questions for Hartman and replies, Office of History, Box VII-37. Fine and Remington, 115-116.

20. Hartman to General R.C. Moore of General Staff, "Plans for mobilization type buildings," July 19, 1940, National Archives, RG 165 - Entry 234 - Box 424. War Department, Adjutant General's Office, "War Department Construction Policy," June 15, 1940, Washington National Records Center, RG 92 - Entry 1980 - Box 699. Can also be found as an appendix in Rose. "Emergency Cantonment Construction," The Military Engineer 33 (January-February 1941): 6-8. Engineering News-Record 127 (June 19, 1941): 66. Also see War Department, Adjutant General's Office, "War Department Construction Policy," August 19, 1941, included as appendix in Rose. Construction Section, Advisory Commission, "Troop Housing Project," October 10, 1940, National Archives, RG 107 - Entry 23 - Box 894.

21. Construction Advisory Committee, "Troop Housing Project," Oct 10, 1940, National Archives, RG 107 - Entry 23 - Box 894. Rose, 334. Fine and Remington, 149-150.

22. Rose, 334. Fine and Remington, 114, 150-151.

23. Fine and Remington, 199-200. Construction Advisory Committee, "Troop Housing Project," October 10, 1940, National Archives, RG 107 - Entry 23 - Box 894.

24. Though the Corps of Engineers did not take over all Air Corps construction until December of 1940, they entered the field of airport engineering much earlier. Rose, for instance, notes that by the fall of 1940 the Civil Aeronautics Administration awarded $321 million to the engineers for building and improving approximately 600 civil airports in the United States. See Rose, 14.

25. Rose, 10-13. Adjutant General to Quartermaster General, "Emergency Construction for Air Corps pilot training program," June 24, 1940, Washington National Records Center, RG 92 - Entry 1890 - Box 701.

26. As mentioned earlier, a detailed history of the army's war mobilization construction program is beyond the scope of this study. Fortunately, Fine and Remington's *The Corps of Engineers: Construction in the United States* provides a thorough history on this subject. This paper will only briefly explore a few issues in camp construction concerning administration and labor, and some problems common to many of the camps.

"Army begins work of Housing increased forces," Engineering News-Record 126 (August 29, 1940): 21. "Handling a 20,000 man crew on a camp job," Engineering News-Record 127 (June 19, 1941): 66.

27. To be sure, Hartman's policy of relying on the most competent and well-respected contractors in the field had its benefits as well. For instance, one of the principal contractors of Camp Edwards, Walsh Construction Company, performed a major service for the Construction Division. Working on one of the first camps, the Walsh people discovered that the information necessary to complete any one building was scattered over hundreds of individual drawings. To expedite the building process, Walsh employed a group of senior draftsmen who assembled and coordinated this information on a single sheet, obviously contributing a great deal to

construction efficiency. Major Groves of the Construction Division was so pleased with these working drawings that he asked the contractor for fiftly sets of prints for reproduction, which he promised to send to all other camp builders. See letter from D.G. Aronberg, Vice President of Walsh Construction Company, to August Sperl, August 13, 1956, in Fine and Remington interviews, Fort Belvoir Office of History, Box VII-36A.

28. Fine and Remington, 205, 263.

29. Fine and Remington, 121, 223, 122.

30. Fine and Remington, 221, 234. Engineering News-Record 127 (June 19, 1941): 68. "A Thousand Buildings in 5 Months," Engineering News-Record 127 (March 27, 1941): 73.

31. Fine and Remington, 221-223, 228. War Department order on WPA restrictions, February 21, 1942, included as appendix in Rose.

32. Fine and Remington, 140. "Camps for 1,418,000," Fortune, (May 1941): 63, 155-156.

33. Fine and Remington, 207-208. Fortune (May 1941): 63, 155-156, 158. "Building a Camp in the Wilderness," Engineering News-Record 127 (May 8, 1941): 87.

34. Fine and Remington, 280-283. Fortune, (May 1941): 63, 155. "Building a Camp in the Wilderness," Engineering News-Record 127 (May 8, 1941). Quotes from San Luis Obispo and Topeka taken from Fine and Remington, 282.

35. "Army Camp in 4 Months," Western Construction News 15 (November 1940): 376. Advertisement in The Constructor 23 (May 194): 5. "A building every 54 min. at Ft. Ord," Engineering News Record 127 (March 27, 1941): 75-76. "New building every 54 minutes marks army camp construction pace at Fort Ord, Calif.," Construction Methods 23 (April 1941).

36. "A Building Every 54 Minutes at Fort Ord," Engineering News-Record 127 (March 27, 1941); "Handling a 20,000 man Crew on a Camp Job," Engineering News-Record 127 (June 19, 1941): 66-68. Somervell, "The Temporary Emergency Construction Program," The Constructor 23 (July 1941): 71-74. War Department, Office of the Quartermaster General, Report on the Activities of the Construction Division, July 1, 1940 - July 1, 1941, Fort Belvoir Office of History, Box VII-2.

37. Somervell recognized the value of publicity and worked hard and successfully to garner enthusiasm for the Construction Division. To this end, he hired George Holmes, a professional public relations expert, who mounted a full scale publicity campaign for the Quartermaster Corps' Construction program. See Fine and Remington, 372-378. Time quoted in Fine and Remington, 259. Fortune (May 1941): 56. Report of the Secretary of War, 1941, 3.

38. Annual Report of the Secretary of War, 1941, 3. National Archives.

39. War Department, Report on the Activities of the Construction Division, 1940-1941, 9, Fort Belvoir Office of History, Box VII-2.

40. Rose, 310 citing WD. AAF., CO at McDill Field to CG of 3rd AF, "Housing for Colored Troops," May 31, 1941. John R. Hardin, Major, Corps of Engineers, Chief, Construction Section, to The Quartermaster General, "Recommended Alterations to Improve the Functional and Structural Characteristics of Temporary Mobilization Type Buildings," August 1, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 496.

41. War Department, Repairs and Utilities 1939-1945 History, 112, Fort Belvoir Office of History, Box VII-38.

42. Newly constructed WAC Modified T.O. barracks were referenced by Plan No. T.O. 700-5510, and converted Theater of Operations barracks were on Plan No. T.O. 700-2311. The "new" 700 Series WAC barracks were drawn up on Plan No. 700-3560; the converted barracks was Plan No. 700-3575. "Typical List of Facilities to be Provided by New Construction or Conversion for Members of the Women's Army Auxiliary Corps," April 15, 1943, National Archives, RG 407 - Entry 360 - Box 3880.

43. War Department, Repairs and Utilities 1939-1945 History, 112 - 14, Fort Belvoir Office of History, Box VII-38. Engineering Manual, Chapter X, Part III, Paragraph 10-21, Corps of Engineers Library. Rose, 428.

44. Information for this section was taken from Arthur Kruse, "Custody of Prisoners of War in the United States," The Military Engineer 28 (February 1946): 70-74.

45. Engineering Manual, Chapter X, Part I, Paragraph 10-04. Corps of Engineers Library.

46. Engineering Manual, Chapter X, Part I, Paragraph 10-04b. Corps of Engineers Library.

47. Fine and Remington Draft, 26-27, Fort Belvoir Office of History, Box VII-35. Interview, Remington with W.R. Deininger, March 13, 1959, Fort Belvoir Office of History, Box VII-36A.

48. Engineering Manual, Chapter X, Part I, Paragraph 10-04d. Corps of Engineering Library.

49. Engineering Manual, Chapter X, Part I, Paragraph 10-04c. Corps of Engineers Library.

50. Engineering Manual, Chapter X, Part I, Paragraph 10-04e. Corps of Engineering Library.

51. As early as 1937, the Quartermaster General enunciated its reason for selecting temporary construction for emergency construction, concluding that "semi-permanent type are neither one thing nor another and become a source of great expense and trouble after their original use has passed." See, Fine and Remington Draft, 4-5, Fort Belvoir Office of History, Box VII-35.

52. "War Department Construction Policy," June 15, 1940. "Supplement to War Department Construction Policy," July 18, 1940. Both in Washington National Records Center, RG 77 - Entry 107 - Box 784.

53. Fine and Remington, 116 and 123.

54. Equally important, the new 700 Series differed from its predecessor series in intended use. Whereas World War I cantonments sheltered troops for a very short time before they were sent overseas for training, the rapid fall of Europe forced the U.S. to recognize that training would have to be done state-side. Thus the mobilization would be of an indefinite, but prolonged, duration. See Part I, Section II above.

55. Rose, 414. Chief, Troop Unit to Design Section - Major Smith. "Engineering Data, Mobilization Buildings," May 16, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 710.

56. DeWolfe H. Miller, 1st Lieut. Quartermaster Corps to The Quartermaster General, "Barrack Heating," May 21, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 732.

57. Although tent camps were quicker to erect, and less expensive in initial materials, over a five-year period the maintenance cost of a tent camp made it similar to a cantonment. Canvas tent roofs needed to be replaced every six months and the Sibley stoves every year. H.B. Nurse, Major, Quartermaster Corps, to The Assistant Chief of Staff, G-4, "Comparative Costs Tents vs. Cantonment Camps," September 19, 1940, Washington National Records Center, RG 92 - Entry 1890 - Box 729. See also, Rose, 408, 413.

58. Interview, Fine and Remington with Mr. Luther M. Leisenring, June 5, 1957, Fort Belvoir Office of History, Box VII-36A.

59. Interview, Fine and Remington with Col. Frank E. Lamphere, June 26, 1956, Fort Belvoir Office of History, Box VII-36A.

60. Truman Committee Hearings, Testimony of General Hartman, 2041. Fine and Remington, 156. Interview, Fine and Remington with General Christian Dreyer, February 27, 1959, Fort Belvoir Office of History, Box VII-36A.

61. Engineering Manual, Chapter XI, Part V, Paragraph 11-33. Corps of Engineers Library.

62. This section was written using the following listed articles. Where specific measurements or fort details are provided, a specific page is footnoted in the text. "Housing the New Army," Engineering News-Record 126 (October 24, 1940) 43-47. "Army Camp in 4 Months," Western Construction News 15 (November 1940) 376-77. "Streamlined Cutting," American Builder 63 (January 1941): 44-45. "Emergency Cantonment Construction," The Military Engineer 33 (January-February 1941): 6-9. "A Building Every 54 Min. at Fort Ord," Engineering News-Record 127 (March 27, 1941) 75-76. "Rolling Out the Barracks," The Constructor 23 (April 1941): 23. "Handling a 20,000-Man Crew on a Camp Job," Engineering News-Record 127 (June 19, 1941): 66-68.

63. "Emergency Cantonment Construction," 9.

64. "Rolling out the Barracks," 23.

65. "Streamlined Cutting," 44.

66. At Camp Edwards, one-story buildings were sheathed before raising, and two-story structures were sheathed after being raised to position. "Handling a 20,000-Man Crew on a Camp Job," 67.

67. "A Building Every 54 Min. at Fort Ord," 7.

68. Rose, 36, citing Construction Division Letter No. 59. "Conformity to Specifications." February 1, 1941.

69. Sturgis Papers. Fort Belvoir Office of History, Box 15, Folder 81.

70. Sturgis Papers. Fort Belvoir Office of History, Box 15, Folder 81.

71. See, for example, M.B. Birdseye, Major, Quartermaster General, Assistant, to The Adjutant General. "Temporary Construction," July 21, 1940, Washington National Records Center, RG 77 - Entry 107 - Box 803. In that memo Birdseye states that some posts and stations are constructing temporary buildings whose plans have been superceded. The list of buildings for which there were new drawings included the 700-1165 63-man barrack with lavatory, 700-1185 63-man barrack with lavatory, 700-1175 45-man barrack with lavatory, and the 700-1195 25-man barrack with lavatory.

72. Truman Committee Hearings, Testimony of General Hartman, 2042.

73. Rose, 28. Fine and Remington, 169.

74. Rose, 356, 37-38.

75. "Handling a 20,000-Man Crew on a Camp Job," Engineering News-Record 127 (June 19, 1941): 66. See also, R.A. Wheeler, Brigadier General, Acting Assistant Chief of Staff, to Lt. Col. Smith, Design Section, Office Constructing Quartermaster, October 13, 1941, National Archives, RG 165 - Entry 234 - Box 418.

76. Nurse, Executive Office, Office of the Quartermaster General, to Fixed Fee Branch, "Housing the Increase to War Strength," October 14, 1940, Washington National Records Center, RG 92 - Entry 1890 - Box 725.

77. "Typical Regiment Layout for Square or Triangular Division," September 9, 1940, Marked "superseded." See also, Plan No. 614-100, "Typical Battalion Block Layout to Provide increased Strength of Units for Triangular Division," September 19, 1940, Revised October 18, 1940. See also, Plan No. 614-179, "Typical Layout - Diagram for a Triangular Division," August 19, 1941, Revised October 7, 1941. All located in Washington National Records Center, RG 77 - Entry 107 - Box 746.

78. See, for example, War Department, The Adjutant General, to Chief of Arms and Services, Commanding Generals of All Corps Areas, and Commanding Officers of Exempted Stations, "Supplement No. 2 to War Department Construction Policy," August 7, 1941. Reproduced in Rose, Appendix I. This shows requirements for a square division tent camp, a Triangular Division and Square Division cantonment.

79. J. Brackinridge, Adjutant General, to The Quartermaster General, "Basic Requirements and Authorities for Housing Troops," August 1, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 784.

80. Value, Liaison Section, to Chief, Engineering Branch, "Company Strength," January 22, 1941. Washington National Records Center, RG 92 - Entry 1890 - Box 725.

81. Hugh J. Casey, Lieut. Colonel, C.E., Assistant, to Assistant Chief of Staff G-4, "Revision of Basic Barracks Plans," July 15, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 725. Fine and Remington Draft, 39, Fort Belvoir Office of History, Box VII-35.

82. Rose, 37. See also, J.G. Brackinridge, Adjutant General, to The Quartermaster General, [Untitled], July 24, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 784.

83. Hugh J. Casey, Lieut. Colonel, C.E., Assistant, to Assistant Chief of Staff G-4, "Revision of Basic Barracks Plans," July 15, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 725.

84. The addition of a 10'-0" bay allowed for the necessary increase in lavatory facilities; the toilets, wash basins and sinks were increased to six. See "War Department General Staff Disposition Form," July 22, 1941, National Archives, RG 407 - Entry 360 - Box 3970. While on inspection of Fort George Meade in Maryland, it was observed that the soldiers had jerry-rigged a system of a coat hook and shelf by each bunk. New barracks plans were ordered which would provide a "shelf and pole for coat hangers behind each cot." Executive Office, Construction Division, to Field Service Branch, General Service Division, "Report of Inspection, Ft. George B. Meade, Md., by Messrs. Richardson, Higdon, Clark and Cline on May 6, 1941," June 21, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 730. How these recommendations were enacted can be seen in Figure 4. Reports from the Air Corps were also reviewed in revising the plans. See, Hugh J. Casey, Lieut. Col., C.E. to Chief of Engineers, "Recommended Alterations to Improve the Functional and Structural Characteristics of Temporary Mobilization Type Buildings," August 9, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 496.

85. "Memorandum on Modifications, Additions, and Revisions to Standard Plans and Specifications for Theater of Operations and mobilization Type Building Necessary Prior to Advertisement For Bids," January 1942. See also, S.D. Sturgis, Jr., Lt. Col., Corps of Engineers, District Engineer, to The Chief of Engineers, "Delays in the Execution of Construction at Air Corps Projects," January 14, 1942. Both in the Sturgis Papers, Fort Belvoir Office of History, Box 14, Folder 80.

86. Rose, 36, citing Construction Division Letter No. 87. "Policy in Regard to Changes in Construction to Conform to Revised Plans," February 11, 1941. See also, The Adjutant General, to The Chief of Engineers, "Deviation from Standard Construction Plans, Mobilization Type Structures," April 8, 1941. Washington National Records Center, RG 92 - Entry 1890 - Box 710.

87. The preference for curvilinear streets arose from the "City Beautiful" movement of the early 20th century. City and park planners, such as Frederick Law Olmsted and his son, advocated the curvilinear street as more aesthetically pleasing as well as cost-efficient. Leon Zach, who was responsible for site planning, had worked with the junior Olmsted. This may account for the curving lines of the triangular division layout.

88. Fine and Remington, 170-173. See also, Interview, Remington and Fine with Col. Frank E. Lamphere, June 26, 1956, Fort Belvoir Office of History, Box VII-36A. For a detailed discussion of the painting issue, see Section VI.H. below.

89. A.C. Johnson, "Cantonment Design and Construction," September 24, 1940, Washington National Records Center, RG 92 - Entry 1890 - Box 729. W.H. Harrison, NDAC, to Honorable Robert P. Patterson, The Assistant Secretary of War, "Cantonment Design and Construction," October 16, 1940, National Archives, RG 107 - Entry 23 - Box 894. In fact, Holabird and Root were subsequently hired to design eight barracks of alternate materials (including concrete block, steel frame, and hollow tile) at Camp Grant in Illinois. These barracks resembled the wood barracks in size and scale. Even the casement windows retained the individual lights. "Experimental Barracks at Camp Grant." Engineering News-Record 127 (May 22, 1941): 50-53. Use of alternate materials at other camps was sporadic, and will probably only come to light after camp inventories are taken.

90. Fine and Remington Draft, 29, Fort Belvoir Office of History, Box VII-35. Telegram from Reybold, Chief of Engineers, to Mr. Flint, Globe Wernicke Company, January 24, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 784.

91. Fine and Remington, 265-266, 333.

92. Fine and Remington, 276.

93. Brehon Somervell, Lt. Col. CE, to Maj. R.C. Moore, Deputy Chief of Staff, [Untitled], February 6, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 719. See also, Fine and Remington, 294, 373.

94. Rose, 35, citing Construction Division Letter No. 27.

95. Fine and Remington, 343.

96. Construction Division Letter 81, "Revisions to Standard Mobilization Building Detail Drawings," February 10, 1941, Washington National Records Center, RG 92 - Entry 2102 - Box 1.

97. Fine and Remington provide a much more detailed and complete study of this transfer, see 440-476.

98. Fine and Remington, 408-415.

99. Fine and Remington, 498. Robert Patterson, Under-Secretary of War, to General Somervell, Assistant Chief of Staff, January 1, 1942, National Archives, RG 165 - Entry 234 - Box 469. Somervell to Chief of Staff, "Subject: Construction of New Camps," January 1, 1942, National Archives, RG 165 - Entry 234 - Box 469.

100. "Chronology of the use of advance planning funds for new camps," undated, National Archives, RG 107 - Entry 23 - Box 894. Fine and Remington, 417.

101. Somervell to Chief of Staff, January 1, 1942, National Archives, RG 165 - Entry 234 - Box 469.

102. Fine and Remington, 351 citing Conf., Casey with Maj. Hardin, Maj. Plank, and Harold A. Kemp of OCE, July 23, 1941, Fort Belvoir Office of History, Box VII-35.

103. Moore, Chief, Design Section, to Chief, Engineering Branch, "Approval of 800 Series Drawings," October 29, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 754. Major Boeckh, Construction Estimating Unit, Design Section, to Chief, Design Section, "Difference in Construction of 63-Man and 74-Man Barracks," July 7, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 725. Engineering Manual, Chapter X, Part I, Paragraph 10-03b, Corps of Engineers Library. See also, Fine and Remington, 350-51. Rose, 318 and 375.

104. Major Boeckh, Construction Estimating Unit, Design Section, to Chief, Design Section, "Difference in Construction of 63-Man and 74-Man Barracks," July 7, 1941. Hugh J. Casey, Lieut. Colonel, CE, to Assistant Chief of Staff, "Revisions of Basic Barracks Plans," July 15, 1941. Both in Washington National Records Center, RG 92 - Entry 1890 - Box 725. The Army command's misconception that the 700 Series barrack meant 63-man and the 800 Series barrack meant 74-man was erroneously perpetuated in the Truman Committee hearings. See, Report of Present Procedures on Matters in Report No. 480, Part 2 (Camps and Cantonments) of the Senate Committee Investigating the National Defense Program, January 16, 1942, Fort Belvoir Office of History, Box V-10.

105. Fine and Remington, 351. Then Captain Dreyer believed that the aqua medias were functionally important to the barracks and that their removal ultimately increased maintenance costs. Dreyer also criticized the 800 Series barracks in terms of their architectural worth and personal comfort. Interview, Fine and Remington with General Christian Dreyer, February 27, 1959, Fort Belvoir Office of History, Box VII-36A.

106. "Frame Buildings for a Western Cantonment," Civil Engineering 13 (June 1943): 269-271. Interview, Remington with Mr. W.R. with Deininger, March 13, 1959, Fort Belvoir Office of History, Box VII-36A. Engineering Manual, Chapter X, Part II, Paragraphs 11-06 and 11.10, Corps of Engineers Library.

107. Interview, Remington with Mr. Simon Sandler, March 6, 1959, Fort Belvoir Office of History, Box VII-36B. Leavey, Chief, Design Section, Engineering Branch, to Chief, Engineering Branch, Construction Division, "Standard Specifications for Temporary Housing," July 14, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729.

108. "Report on Inspection of Quartermaster Activities by Maj. Gerald R. Tyler of December 9, 1941 Meeting at Fort Leonard Wood," December 15, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729.

109. Fine and Remington, 351. There also appears to have been confusion over whether and when Bergstrom was proposing to use balloon or platform construction. For example, an internal memorandum explains that the 22' post in a barracks drawing was actually two splined posts. Farrar, Architecture Unit, to Chief, Design Section, "Mobilization Type Structures," July 18, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 730.

110. Interview, Fine and Remington with General Renshaw, June 25, 1959, Fort Belvoir Office of History, Box VII-36B.

111. Comments, General L.R. Groves, Fort Belvoir Office of History, Box VII-37. Interview, Remington with Mr. W.R. Deininger, March 13, 1959, Fort Belvoir Office of History, Box VII-36A.

112. John R. Hardin, Major, Corps of Engineers, Chief, Construction Section, to The Quartermaster General, "Drawings for Mobilization Type Buildings," August 4, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 496. The Air Corps command noted that they would issue similar directives to their division and district engineers. See, Circular Letter, "Airfield Construction - Standard Plans and Specifications for Mobilization Type Buildings," August 27, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 495. For example, the Air Corps adopted the 74-man barracks as standard two weeks after it was approved for cantonment construction. See, Frank M. Kennedy, Colonel, Air Corps, Chief, Buildings & Grounds Division, "Additions of Standard Barracks 74 Man Type to Standard List of Mobilization Type Buildings," August 13, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 496.

113. For example, Fort Gordon in Augusta, Georgia erected both 700 Series and 800 Series barracks in June 1942. Telephone conversation, Lisa Collins, Real Property Administrator, Engineering Services, with author, August 10, 1988. It was more common for a camp to have a mixed Series plan, by using the new 800 Series drawings augmented by unchanged 700 Series buildings. See, e.g., Appendix II.

114. The nine original camps were to be located in Blackston, Virginia; Columbus, Indiana; Augusta, Georgia; Cookson Hills, Oklahoma; Neosho, Missouri; Fort Smith, Arkansas; Santa Maria Lompoc, California; Eugene, Oregon; and Medford, Oregon. See, "Engineering contracts awarded for nine new army cantonments," Engineering News-Record 127 (Mary 29, 1941): 3.

The 14 additional camps were to be located in Bastrop, Texas; Paris, Texas; Waco, Texas; Fort Huachuca, Arizona; Venice, Florida; West Yellowstone, Montana; Colorado Springs, Colorado; Corvallis, Oregon; Durham, North Carolina; Marysville, California; Morganfield, Kentucky; a site spanning both Hopkinsville, Kentucky and Clarksville, Tennessee; Ozark, Alabama; and the expansion of the old Camp McCoy, Wisconsin. "New Army Building Program," The Constructor 23 (September 1941): 33.

By January 1942, the plans had been slightly revised and clarified. The following five cantonments had been awarded or were actually under construction: Blackstone, Virginia; Gordon, Georgia; Ozark, Alabama; Bastrop, Texas; Fort Huachuca, Arizona. The following ten cantonments were in advanced stages of planning: Centerville, Missouri; Lewiston, Illinois; Killeen, Texas; Gainesville, Texas; Chillicothe, Ohio; Paris, Texas; Morganfield, Kentucky; Camp McCoy, Wisconsin; Corvallis, Oregon; Marysville, California. See, "Camps Awarded and/or Underway [and] Advanced Planning - Camps," January 22, 1942, National Archives, RG 107 - Entry 23 - Box 894.

115. "Engineering Contracts awarded for nine new army cantonments," Engineering News-Record 127 (May 29, 1941): 3.

116. Telephone inquiries from author to Camp Carson, Colorado; Fort Campbell, Kentucky; Fort Rucker, Alabama; Fort Gordon, Georgia; Camp Adair, Oregon, Camp Beale, California; Camp Pickett, Virginia, August 10, 1988. See also, HABS photographs of Camp McCoy (Fort McCoy {HABS No. WI-308}, Sparta vicinity, Monroe County, Wisconsin).

117. There were, of course, many exceptions to the rule. For instance, engineers at Ft. Gordon in Georgia built 700 Series barracks in the spring of 1942 along side of 800 Series barracks. Perhaps the most fitting conclusion here is that, while most commanders seemed to have a predilection for the new drawings, each commander turned to the structure most suitable for the needs of his post, and such conditions varied.

118. Telephone interview, Mr. Owen at Ft. Rucker with author, August 10, 1988. Telephone interview, Mr. Graham at Ft. Carson with author, August 10, 1988. Interview, Fine and Remington with General C.F. Dreyer, February 27, 1959, Fort Belvoir Office of History, Box VII-36a. Circular Letter 2105/Construction Division No. 545. "File Index Numbers for Standard Construction Drawings," October 19, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 746. This document lists the key series numbers of building plans. The 700 Series and T.O. 700 Series are given, but there is no 800 Series. The Engineering Manual notes that the 800 Series had been discontinued because it "proved to be more strongly built than necessary, and the cost was unduly high." Chapter X, Part I, Paragraph 10-03b (October 1943), Corps of Engineers Library.

119. "Camps awarded and/or underway," [undated], National Archives, RG 107 - Entry 23 - Box 894. War Department, Corps of Engineers, Monthly Progress Report, 128, February 28, 1943, Corps of Engineers Library. "Chronology of the use of advance planning funds for new camps," undated, National Archives, RG 107 - Entry 23 - Box 894. Fine and Remington, 417.

120. Smith, Executive Office, Design Section to Colonel Casey, "Standard Specifications for Temporary Housing 3400-E Tentative," July 19, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729.

121. Fine and Remington, 526, 531, 534. "Conservation Construction," December 1943, Washington National Records Center, RG 92 - Entry 1890 - Box 701.

122. Fine and Remington, 546, 549.

123. Circular Letter No. 1662/Construction Division No. 447, "Revision to Framing Details on Standard Drawings Nos. 800-100 and 800-101," June 1, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 706. Fine and Remington, 547.

124. Rose, 424. See also, V.H. Jacobs, Adjutant General, to The Chief of Engineers, "Conversion of Permanent Tent Camps Into Hutments," January 30, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 754.

125. "War-Front Type Barracks Built in Record Time," Engineering News-Record 128 (July 16, 1942): 68-69. Demountable CCC buildings were also moved to army camps. See, "CCC Buildings Salvaged for Army Camps," Engineering News-Record 129 (July 15, 1943): 92-94.

126. Fine and Remington, 483, 532-33.

127. George Hall,. Lt. Col., Corps of Engineers, Chief, Construction Section, to General Kingman, "Barracks Space Allotments," September 19, 1940. See also, John R. Hall, Colonel, Medical Corps, to The Quartermaster General, [Untitled], September 22, 1941. Both in Washington National Records Center, RG 77 - Entry 107 - Box 731.

128. Included in the estimation was the established projection that at any one time 4% of the occupants would be hospitalized. It was also noted that the second floor of the 700-1165 barracks were not tall enough to accommodate double bunking. Robert B. Field, Major QMC, Assistant, to Chief of Engineers, [Untitled], October 2, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 725. See also, John R. Hardin, Lieut. Colonel, Corps of Engineers, Chief, Construction Section, to Colonel Frank M. Kennedy, Chief, Building and Grounds Division, [Untitled], October 30, 1941, Washington National Records Center, RG 77 - Entry 107 - Box 784.

129. Rose, 431-32. Fine and Remington, 559-560. See also, Thomas M. Robbins, Major General, Assistant Chief of Engineers, to Colonel Pierson, Requirements Division, "Capacity Barracks," July 4, 1942. E. Reybold, Major General, Chief of Engineers, to Commanding General, Services of Supply, "Double-Bunking of Camps and Air Force Stations," September 21, 1942. Both in Washington National Records Center, RG 77 - Entry 107 - Box 784.

130. "War Department Construction Policy, Zone of the Interior." Reproduced in U.S. Command & General Staff School. Construction. (Fort Leavenworth, Kansas: 1942), 106-07.

131. War Department, "Directive for War-Time Construction," June 1, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 735.

132. "T-of-O Equivalents for Mobilization Type Buildings," March 3, 1942, reproduced in Rose, Appendix I.

133. Engineering Manual, Chapter X, Part I, Paragraph 10-03c, Corps of Engineers Library.

134. Interview, Fine and Remington with Major General A. C. Smith, March 1, 1955, Fort Belvoir Office of History, Box VII-36B. Interview, Fine and Remington with General Christian F. Dreyer, February 27, 1959, Fort Belvoir Office of History, Box VII-36A.

135. W.V. Kahler, to Mr. M.J. Madigan, "Request for AA Priority - Camp Claiborne, Louisiana," January 12, 1942, National Archives, RG 107 - Entry 23 - Box 894.

136. Telegram from Colonel Groves, Chief of Engineers, to All Division Engineers, June 1, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 804.

137. Circular Letter No. 2105/Construction Division No. 535, "File Index Numbers for Standard Construction Drawings," October 19, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 746.

138. Circular Letter No. 2105/Construction Division No. 545, "File Index Numbers for Standard Construction Drawings," October 19, 1942, Washington National Records Center, RG 77 - Entry 107 -Box 746.

139. Arthur Allen, Major, IGD, to The Inspector General, "Emergency Type Barracks," May 28, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 481. Rose, 427 citing WD. AGF. Assistant Adjutant General, to Commanding General, Service of Supply, "Construction for Triangular Infantry Divisions," May 30, 1942. Engineering Manual, Chapter X, Part II, Paragraph 10-10b, Corps of Engineers Library. See also, "Memorandum to Accompany File Index Numbers for Standard Construction Drawings," January 26, 1943, Washington National Records Center, RG 77 - Entry 107 - Box 746. See also, "Comments on Plans and Specifications Submitted to O.C.E. for Review," February 2, 1943, Washington National Records Center, RG 77 - Entry 107 - Box 746. How the new barracks took advantage of local materials was examined in "New Barrack Design Saves Lumber," Engineering News-Record 130 (November 2, 1944): 68-69.

140. "Emergency Cantonment Construction," The Military Engineer 33 (January-February 1941): 8.

141. "Fort Devens Construction Employs 14,000 Men on 1,011 Wood Buildings," Construction Methods 23 (March 1941): 44. "Central Wood Mill Precuts All Framing Lumber for 14,000,000 Army Camp," Construction Methods 23 (February 1941): 38. "Housing the New Army," Engineering News-Record 126 (October 24, 1940): 44.

142. Interview, Fine and Remington with General Christian Dreyer, February 27, 1959, Fort Belvoir Office of History, Box VII-36A.

143. Robert D. Field, Major Quartermaster Corps, to Zone Const. QM #6, [Untitled], March 30, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 730.

144. Reviewing Committee, Chas. T. Higham, H.R. Doswell, Benedict Farrar, to Mr. Bergstrom, "Hoods and Canopies on Barracks Buildings," March 13, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 725.

145. Bergstrom, Chief, Architecture Group, to Executive Officer, Design & Engineering Section, "Revisions of Drawings for Temporary Mobilization Housing," Washington National Records Center, RG 92 - Entry 1890 - Box 725.

146. Interview, Fine and Remington with General Christian Dreyer, February 27, 1959, Fort Belvoir Office of History, Box VII-36A.

147. Compare "Housing the New Army," Engineering-News Record 126 (October 25, 1940): 44 with "The Battle of Production," The Constructor 25 (July 1943): 75. See also Mobilization Drawing No. 800-443. Photographs of the Camp McCoy Field Reports also show an external chimney on an 800 Series barracks.

148. War Department, Repairs and Utilities 1939-1945 History, 111, Fort Belvoir Office of History, Box VII-38.

149. Engineering Manual, Chapter XI, Part II, Paragraph 11-09, Corps of Engineers Library.

150. E.L. Van Sickel, SCQM, to Captain Rafferty, "Suggested Change in Plans of 63 Man Barracks," January 14, 1941. Scheid, Engineering & Design, to Capt. Rafferty, Operations, [Untitled], January 18, 1941. Both in Washington National Records Center, RG 92 - Entry 1890 - Box 725. W.H. Harrison, Office of Production Management, to General B.B. Somervell, February 4, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729. Construction Division Letter No. 10, "Revisions to Standard Detail Drawings," February 25, 1941, Washington National Records Center, RG 92 - Entry 2102 - Box 1. Construction Division Letter No. 181, "Revisions to Standard Mobilization Buildings," March 28, 1941, Washington National Records Center, RG 92 - Entry 2102 - Box 2.

151. Construction Division Letter No. 299, "Fire Hazard - Existing Standard Mobilization Buildings," June 13, 1941, Washington National Records Center, RG 92 - Entry 2102 - Box 2. See also, G.F. Lewis, Lt. Colonel, Quartermaster Corps, to Zone Constructing, Quartermaster, Zone VIII (pencilled in "For Each and All Zones"), "Fire Hazards - Existing Standard Mobilization Buildings -- Heating Rooms," September 13, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 732.

152. Gen. E.B. Gregory, Colonel, Quartermaster Crops, Acting The Quartermaster General, to The Assistant Chief of Staff, G-4, [Untitled], February 21, 1940, Washington National Records Center, RG 92 - Entry 1890 - Box 699.

153. Rose, 319, citing WD. OCAC to GC and CO of 11 Air Corps Activities, "Correction of Unsatisfactory Flooring (Second Floor) in Temporary Cantonment Type Barracks." May 23, 1941.

154. Engineering Manual, Chapter X, Part I, Paragraph 10-03a, Corps of Engineers Library.

155. War Department, Repairs and Utilities 1939-1945 History, 100-02, Fort Belvoir Office of History, Box VII-38. "Tentative Draft of Additions to 'Floor Covering' Section RU 0602.02," Washington National Records Center, RG 77 - Entry 107 - Box 481.

156. Capt. Dreyer to Major Casey, "OM-1 Building," March 28, 1941. Mr. Bergstrom to Major Casey, "OM-1 Bldg," April 2, 1941. Both in Washington National Records Center, RG 92 - Entry 1890 - Box 710.

157. Engineering Manual, Chapter X, Part I, Paragraph 10-03, Corps of Engineers Library. See also, House Committee Hearings, April 1, 1941, Part I, 107.

158. House Committee Hearings, April 1, 1941, Part I, 106.

159. Engineering Manual, Chapter X, Part I, Paragraph 10-02b, Corps of Engineers Library.

160. "Emergency Cantonment Construction:" The Military Engineer 33 (January-February 1941): 8. In other cases, such as at Camp McCoy in Wisconsin, the coal boxes were placed between the furnace room doors of two adjacent barracks.

161. W. H. Harrison, Advisory Commission of the Council of National Defense, to General Charles D. Hartman, [Untitled,] November 6, 1940, Washington National Records Center, RG 92 - Entry 1890 - Box 732.

162. Jerry V. Matejka, Lt. Col, GSC, to Lt. Col. F.F. Hall, "Comments and Suggestions for New Camps," March 18, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729. Report on "Inspection of Fort George G. Meade," May 12, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 730. DeWolfe H. Miller, 1st Lieut., Quartermaster Corps, to The Quartermaster General, "Barrack Heating," May 21, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 732.

163. Cross Index 625, From Hdqtrs Southeast Army Air Forces Trng Center, Maxwell Fld, Ala., August 19, 1942, Washington National Records Center, RG 77- Entry 107 - Box 784.

164. Engineering Manual, Chapter X, Part I, Paragraph 10-02b, Corps of Engineers Library.

165. Allen, Ground Troop Section, Engineering Branch to Troop Facilities Section, Operations Branch, "Standard Specifications for Temporary Housing," February 23, 1942, Washington National Records Center, RG 77 - Entry 107 - Box 746. See also, Interview, Fine and Remington with General Christian Dreyer, February 27, 1959, Fort Belvoir Office of History, Box VII-36A.

166. J.L. Person, Captain, Corps of Engineers, Assistant Chief, Construction Program, to The Chief of the Air Corps, "Winterproofing Cantonment-type Construction," August 26, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729. See also: "Office of the Quartermaster General; Construction Division; Plan No. 800-120; Mobilization Buildings; 29'-6" Wide Bldg. - Bearing Partitions; Two Story; Architectural; Typical Plan, Elevation & Sections," dated May 28, 1941. This drawing shows the wainscot, insulation board, and floor insulation for -20 degrees zone.

167. John B. Cooley, Adjutant General, to the Chief of the Army Air Forces, "Winterproofing Cantonment-type Construction. Various Stations," October 29, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729. For the correspondence leading up to this decision, see also, Frank M. Kennedy, Colonel, Air Corps, Chief, Building & Grounds Division, to The Adjutant General, "Winterproofing Cantonment-type Construction," September 3, 1941. And John B. Cooley, Adjutant General, to The Quartermaster General, "Winterproofing Cantonment-type Construction. Various Stations," October 10, 1941. Both at Washington National Records Center, RG 92 - Entry 1890 - Box 729.

168. Herman T. Johnson, Major, CE, Executive Officer, Engineering Branch to The Adjutant General, "Storm Entrance Shelters," January 5, 1942. V.H. Jacobs, Adjutant General, to the Chief of Engineers, "Storm Entrance Shelters," January 15, 1942. Both at Washington National Records Center, RG 77 - Entry 107 - Box 784.

169. War Department, Reports and Utilities 1939-1945 History, 97, Fort Belvoir Office of History, Box VII-38.

170. Interview, Remington and Fine with Col. Frank E. Lamphere, June 26, 1956, Fort Belvoir Office of History, Box VII-36A.

171. G.S. Stuart, Executive Director, PDCA, to W.H. Harrison, Director of Construction, Council of National Defense, [Untitled], October 1, 1940, National Archives, RG 107 - Entry 23 - Box 894.

172. "War Department Construction Policy, Supplement No. 7," November 4, 1940, Reproduced in the Sturgis Papers, Fort Belvoir Office of History, Box 15, Folder 81. See also, W.H. Harrison, Director, Construction Section, to George S. Stuart, PDCA, [Undated], National Archives, RG 107 - Entry 23 - Box 894. See also, "Standard Specifications for Temporary Housing, Specification No. 1700-E. Addendum Nos. 13 and 17 (January 17, 1941, and February 21, 1941), Fort Belvoir Office of History, Box V-7.

173. War Department, Repairs and Utilities 1939-1945 History, 98-99, Fort Belvoir Office of History, Box VII-38.

174. Describing World War I lavatory facilities, an old soldier recalled, Upton had a poor water and sewer system of a temporary character, water lines were of wood, would not stand much pressure, and were always leaking. . . Barracks at Upton had no toilets or washrooms and soldiers had to go maybe a block or two outdoors to a detached building to wash or use the latrine day or night in all kinds of weather; this may in part have been the cause of so much flu in World War camps. House Committee Hearing, April 1, 1941, Part I, 107.

175. C.D. Hartman, Col., QMC, to Brigadier General R.C. Moore, Assistant Chief of Staff, G-4, "Plans for Mobilization Type Buildings," July 19, 1940, National Archives, RG 165 - Entry 234 - Box 424.

176. "Emergency Cantonment Construction," The Military Engineer 33 (January-February 1941): 6.

177. H.E. Pitz, Colonel, Quartermaster Corps, Assistant, to The Adjutant General, [Untitled], March 15, 1940, Washington National Records Center, RG 92 - Entry 2102 - Box 1.

178. Jerry V. Matejka, Lt. Col. GSC, to Lt. Col, F.F. Hall, "Comments and Suggestions for New Camps," March 18, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729. Lloyd D. Brown, Lt. Col. GSC to Lt. Col. Hall, "Camp Construction," March 18, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 729. Report of "Inspection Trip to Fort George G. Meade," May 12, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 730. Engineering Manual, Chapter X, Part I, Paragraph 10-03a, Corps of Engineers Library.

179. Construction Division Letter No. 90, "Additional Shower Heads for 63-Man Barracks," February 13, 1941, Washington National Records Center, RG 92 - Entry 2102 - Box 1. Engineering Manual, Chapter X, Part II, Paragraph 10-10g, Corps of Engineers Library. "Report of Inspection Trip to Fort George G. Meade," May 12, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 730.

180. Engineering Manual, Chapter X, Part I, Paragraph 10-02b, Corps of Engineers Library. See also, "Standard Specifications for Temporary Housing, Specifications No. 8000-E. Addendum No. 5," (February 16, 1942), Fort Belvoir Office of History, Box V-7.

181. Engineering Manual, Chapter X, Part I, Paragraph 10-03a; Chapter XI, Part II, Paragraph 11-09; Chapter XI, Part V, Paragraphs 11-29 and 11-31, Corps of Engineers Library.

182. War Department, Repairs and Utilities 1939-1945 History, 104-05, Fort Belvoir Office of History, Box VII-38.

183. Sturgis Papers, Fort Belvoir Office of History, Box 15, Folder 81.

184. War Department, Repairs and Utilities 1939-1945 History, 105-06, Fort Belvoir Office of History, Box VII-38.

185. War Department, Repairs and Utilities 1939-1945 History, 95, Fort Belvoir Office of History, Box VII-38.

186. C.D. Hartman, Brigadier General, Quartermaster Corps, to The Assistant Secretary of War, [Untitled], October 4, 1940. Robert P. Patterson, The Assistant Secretary of War, to Brig. General Charles D. Hartman, Assistant Quartermaster General, "Roofing of Cantonment Housing," October 8, 1940. Both in National Archives, RG 107 - Entry 23 - Box 894.

187. "Standard Specifications for Temporary Housing, Specification No. 1700-E. Addendum No. 7," (November 12, 1940), Fort Belvoir Office of History, Box V-7.

188. S.J. Chamberlin, Lt. Col., General Staff, Chief, Construction Branch, to General Moore, "Type of siding used in temporary construction," June 21, 1940, National Archives, RG 165 - Entry 234 - Box 418.

189. Possibly Fort Sill. See Interview, Fine and Remington with General Christian Dreyer, February 27, 1959, Fort Belvoir Office of History, Box VII-36A.

190. "Steel Siding for Cantonment Buildings," The Constructor 23 (October 1941): 42.

191. "Standard Specifications for Temporary Housing, Specifications No. 1700-E. Addendum No. 6," (October 30, 1940), Fort Belvoir Office of History, Box V-7.

192. "Standard Specifications for Temporary Housing, Specifications No. 1700-E, Addendum No. 10," (December 9, 1940), Fort Belvoir Office of History, Box V-7.

193. Reviewing Committee, Chas. T. Higham, H.R. Doswell, Benedict Farrar, to Mr. Bergstrom, "Termite Shields," March 13, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 725.

194. Smith, Executive Officer, Engineering & Design Section, to Executive Officer, Architectural Group, Engineering & Design Section, [Untitled], April 8, 1941. Bergstrom, Chief, Architectural Group, to Executive Officer, Design & Engineering Section, "Revisions of Drawings for Temporary Mobilization Housing," April 10, 1941. Both in Washington National Records Center, RG 92 - Entry 1890 - Box 725. An indication of how haphazardly directives were disseminated to the field is seen in the reminder six months later that termite shields had been eliminated. Construction Division Letter No. 487, "Elimination of Termite Protection," September 26, 1941, Washington National Records Center, RG 92 - Entry 2102 - Box 4.

195. "Frame Buildings for a Western Cantonment," Civil Engineering 13 (June 1943): 269-271.

196. "Housing the New Army," Engineering News-Record 126 (October 24, 1940): 44. Construction Division Letter No. 8, "Skirting Details," February 10, 1941. Washington National Records Center, RG 92 - Entry 2102 - Box 1. Leavey, Chief of the Engineering Branch, recommended that the skirting be altogether eliminated, arguing that it could have saved $2,000,000 in the 1940 construction program. He rejected the argument that the costly skirting was necessary for appearance, but recognized that skirting could have insulation benefits. Leavey, Chief, Engineering Branch, to Chief Constructing Division, "Termite Protection, Hoods and Canopies on Barracks Buildings," March 28, 1941, Washington National Records Center, RG 92 - Entry 1890 - Box 725.

197. Fine and Remington, 522.

198. G.S. Stuart, Executive Director, Painting and Decorating Contractors of America, to W.H. Harrison, Director of Construction, National Defense Advisory Council, [Untitled], October 1, 1940, National Archives, RG 107 - Entry 23 - Box 894.

PART II

CAMP EDWARDS:

A 700 SERIES CANTONMENT

by Keith Landreth

with contributions
by Richard Hayes, Daniel R. Lapp,
James Bowman and Steve Turner

Figure 36: Aerial View to Northwest of 1200 Block and part of 1300 Block, Camp Edwards, Massachusetts

OVERVIEW

Camp Edwards, located in the Bourne vicinity of Cape Cod, Massachusetts, was one of the first World War II mobilization cantonments constructed. Although the project suffered from contracting difficulties, supply bottlenecks, and labor shortages often typical of first-time applicants, Camp Edwards was viewed, in retrospect, as one of the most well-organized and resourceful programs of the mobilization effort. Innovative techniques ranging from the table of organization, payroll and accounting systems, and the combining of construction operations into single plans, to the use of stovepipe for structural piers were all developed at Camp Edwards and all served to enhance and facilitate efficiency and speed in construction. All of these modifications, and no doubt others that have not been noted in the historical record, were carried on to other mobilization projects nation-wide, either in the form of alterations to the design structure or by Army engineers and other construction personnel who gained their first experience of cantonment building at Camp Edwards in fall of 1940.[1]

Designated "Camp Edwards" after the Commander of the World War I, 26th (Yankee) Infantry Division, the Massachusetts Military Reservation (MMR) was established in 1935 by the Commonwealth of Massachusetts for the purpose of National Guard and Army Reserve training. During the years 1935-40, the Commonwealth and the Federal Government constructed sixty-three buildings and two, 500'-wide, turfed runways on this site. The majority of the construction of these initial facilities was performed by the Works Progress Administration (WPA). In 1940, as part of a nation-wide mobilization effort, the U.S. Army leased Camp Edwards from the Commonwealth under a 99-year lease and began construction of an expanded facility, based on 700 series plans, to accommodate up to 30,000 troops and a 1,722 bed hospital complex-- a project which was completed in a mere 125 days. Because this was the first mobilization camp to be built using the 700 series drawings, Camp Edwards would provide a prototype for others nation-wide.

THE PLANNING OF CAMP EDWARDS, 1940

During the summer of 1940, with his 700 series drawings in readiness, Col. Charles D. Hartman, chief of the Construction Division, anxiously awaited the funds that would enable him to begin construction of the mobilization camps. In Congress, the issue over funding for construction was directly tied to the issue over the National Guard and Selective Service bills. Congressional debates, led by the isolationists arguing against U.S. involvement in the war, delayed the decision to call the National Guard units into service, and issue a draft to increase the Regular Army. Without the passing of the National Guard and Selective Service bills, there would be no men and, likewise, no need to provide increased housing and training facilities. The debate continued despite warnings that, left without an adequate defense force, our national security was at risk.[2]

With the approval by Congress of the National Guard and Selective Service Acts on the 27th of August and 19th of September 1940, the first steps towards the construction of World War II mobilization cantonments began with the build-up of existing National Guard Camps. The necessary funding finally came on the 9th of September when president Roosevelt signed the second supplemental defense appropriation bill, which included, among other things, money for the expansion of guard camps.[3] Construction, therefore, began at existing guard and division camp sites, while site selection and planning for new camps was underway.[4]

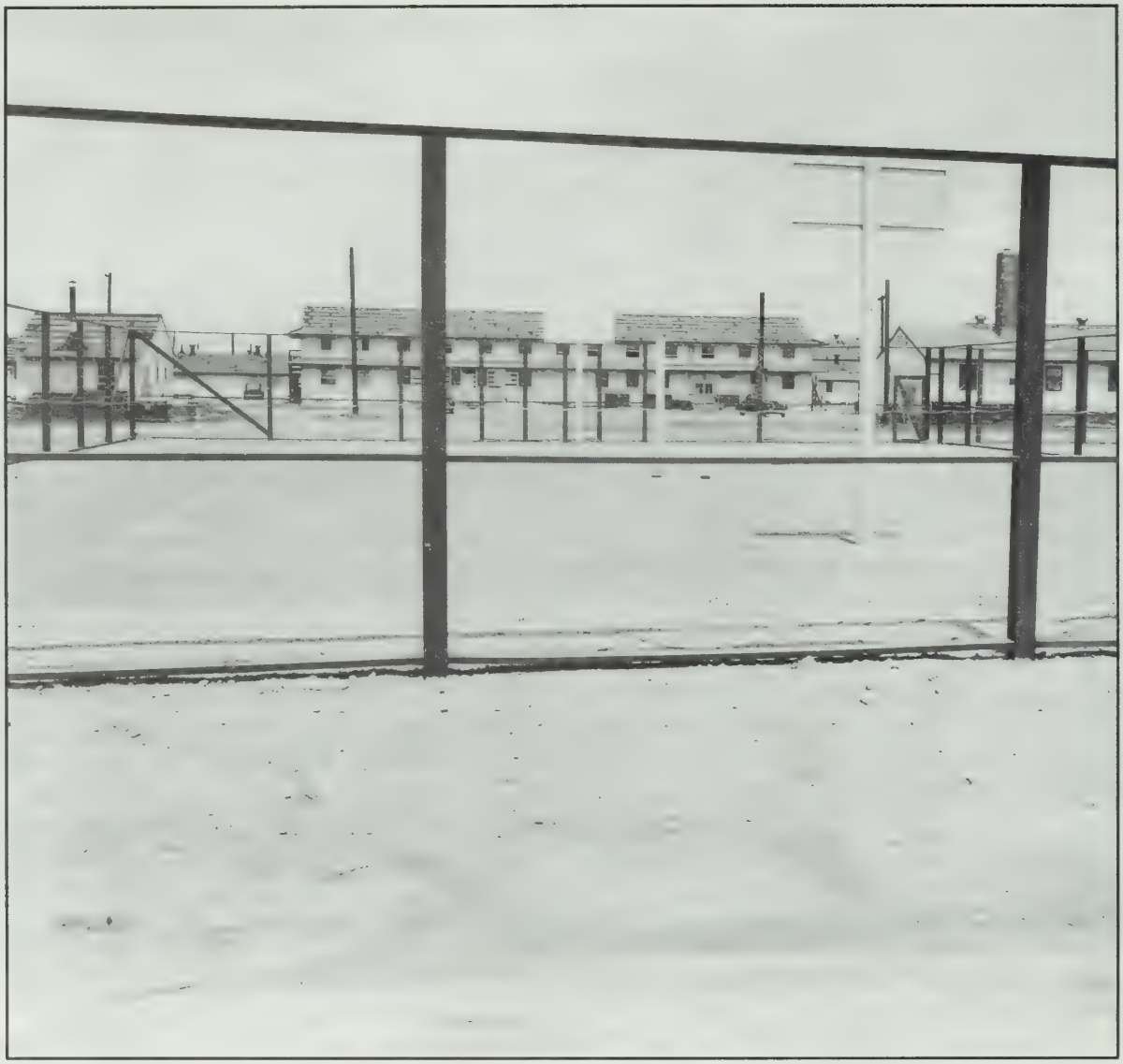


Figure 37 Basketball courts, Camp Edwards.

Speed in construction was of the utmost importance. The soldiers could not be called into service without adequate facilities in which to house them.[5] Limited, temporary funding had provided for clearing and grading at Camp Edwards in early August. Still, establishing the expanded layout of the camp, the first step in construction, was yet to be done. To expedite the planning, the base commanders were given the authority to approve layouts rather than deferring to the Construction Division for approval, as was generally the rule.

The main cantonment area had been organized under the First Army as a standard National Guard square division, with a total of twenty regimental blocks for infantry and artillery regiments. The new main camp was laid out around the existing quadrangle. Inside the regimental square, three regimental groups were located to each side and the center formed a one-mile-square parade ground. The general pattern of the individual regimental layout was as follows: On the edges of the parade ground were located the regimental administration buildings, officers' quarters and mess halls. Between the inner roads (around the parade grounds) and the outer roads were located the company storehouses, miscellaneous regimental buildings--including the guard house, infirmary, exchanges, day rooms, and company mess halls. Beyond the outer roads are located the barracks, storehouses and motor repair shops, gasoline stations, truck parks, etc. Outside the main cantonment additional blocks were constructed for the hospital, logistics, quartermaster depots, "colored" infantry, and service commands.[6]

The basic unit was composed of a company and contained three 63-man barracks, a mess hall, a storehouse and a recreation building. Six Company units formed a regimental group, which included in addition to the company unit structures: a headquarters building, infirmary, barracks for the headquarters company, a cold storage building, a truck garage and a firehouse. Regimental groups were separated from each other by a 250' fire-break.

The Camp Edwards National Guard cantonment was originally constructed to house one square division, two coast guard artillery regiments, one reserve artillery regiment, a "colored" infantry battalion, and an observation squadron with housing, support, logistics facilities for 1,279 officers and 25,482 enlisted men. The entire mobilization cantonment contained 1,179 temporary buildings with utilities. Supplemental directives for the new, World War II camp increased the total personnel and housing facilities to accommodate 1,674 officers and 30,159 enlisted men. The World War II additions to the cantonment included accommodations for a 4,469-man Corps Area Service Command, one medical battalion, one signal battalion and two "colored" quartermaster truck companies.

The additions raised the total number of structures in the new cantonment to 1,406. The major building types noted in the construction summary included 438 barracks, 184 mess halls, 54 officers' quarters and mess buildings, 31 administrative buildings, 28 storage buildings, 13 chapels, 217 recreation structures, 82 hospital units and 314 miscellaneous structures. Building materials used in the cantonment structures included 63 million board feet of lumber; 5 million square feet of fiber-board, 26 thousand kegs of nails, 64 thousand yards of concrete, and 85 thousand rolls of roofing and sheathing paper. Upon completion, the estimated cost of the cantonment was $29,300,000.

THE CONSTRUCTION OF CAMP EDWARDS, 1940-41

Construction at Camp Edwards began on September 12, 1940, and all essential facilities were completed in 125 days. Colonel Hartman and his staff were responsible for the production of the 700 series

standard drawings used in the construction of the main cantonment at Camp Edwards.[7] Altogether, over 600, 700 series drawings were reviewed and approved for use on site by the contractor. Plans and specifications for special items for which U.S. Army drawings were not available (e.g. some utilities and utility structures) were drafted by the architect-engineers (in conjunction with the general contractor), as were any necessary modifications.[8]

The plans used at Camp Edwards were modified by the architect-engineering firm of Charles T. Main of Boston, who signed a contract on the 12th of September 1940. On that same day, their chief engineer, Colonel Gunby, and his men set up offices in one of the National Guard barracks. The first order of business was to secure the site layout. Some surveying had already been done under various WPA projects. As quickly as possible, the additional topography needed to expand the site to meet its new demands was acquired. All of the field layout, both for buildings and utilities, was then undertaken.

Because the building contractor started work at about the same time as the architect-engineers, a tremendous burden was put on the surveying department to stake out various areas where lumber could be set with the minimum inconvenience to the building crews, and to keep ahead of construction. For each building, the architect-engineers had to lay out the four corners and stake out the footings, as well as utilities. In order to accomplish this, a large field force of architect-engineers was required, twenty-seven field parties composed of three men each at the height of the planning phase.[9]

Once layouts were set, the architect-engineers went to work on the structural plans and blueprints for buildings, utilities, roadways, etc. Since Camp Edwards was the first mobilization camp built based on the 700 series drawings, the plans were as yet untested on such a large scale. Modifications, therefore, were necessary. It was the job of Main's architect-engineers to adapt the standardized 700 series drawings to the specific site. They were to recommend changes that would expedite construction, but were to keep revisions to a minimum. Their staff was quickly increased to 300, and the particulars of the needed changes in the drawings were made and handed over to the contractor, the Walsh Construction Company of Davenport, Iowa.[10]

Walsh's draftsmen assembled these structural details onto single plans related to each independent operation to enhance construction efficiency. Each plan contained the details necessary to accomplish a minor portion of the superstructure or substructure work (e.g. footings details, framing, heating, electrical).[11] These plans would then be checked by Col. Gunby's men. The finals were sent to Main's blueprint department which worked around the clock to supply the construction foremen with working drawings. These plans were so successful that fifty sets of duplicate prints were commissioned for use by other camps.[12] In addition, they enabled the contractor to begin to pour the concrete for foundations on the 18th, only six days after signing the construction contract.

The contracts for the principal construction areas were set on a cost plus fixed-fee basis. Cost estimates were prepared, based on a list of buildings with itemizations for each structure type and utilities. A total construction cost, including the contractor's fee, was then calculated.[13] The lumber was purchased by the War Department on bid and inspected independently by the Lumber Inspection Bureau Incorporated. Most of the building supplies and services, were obtained locally, whenever possible. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts, and the F.V. Lawrence Plant in Falmouth. Test Engineers were employed through the firm of Thompson and Litchfield Company of Boston.[14] Principal subcontractors were Fischback and Moore Incorporated of New York City (electrical work), Raisler Corporation of New York City (heating), and M. Ahern Company, Boston (plumbing).[15]

Most of the construction materials came to the camp by rail. A railroad connection about four miles long was built from the North Falmouth station of the Old Colonial section of the New York, New Haven

Figure 38 Mess Hall interior, Camp Edwards

& Hartford Railroad to the camp. The railroad spur led to an embarkation yard with a coal trestle and five tracks serving the quartermaster depot.[16] Prior to this, supplies had to be hauled eleven miles from the closest depot large enough to handle the volume, located in Sagamore, Massachusetts.[17]

The only major modifications to the standard Army 700 series plans at Camp Edwards occurred when pouring began for the foundations of the structures. The original specifications called for a 16", 4'-0" deep footing with an 8" square pier. Instead, it was determined that circular footings of equivalent size, drilled with a gasoline-powered post-hole augur, would be more efficient. The pier above the footing was formed with a standard 26" long, 8" diameter section of black stovepipe. Because the stove pipe was inexpensive, it was left in place surrounding the pier. This eliminated the cost of form construction, removal, and back-filling and proved extremely cost effective.[18]

Camp Edwards faced many problems regarding labor, which added to delays in the construction. Military construction projects attracted hoards of applicants. Still, the maximum wage rates that Hartman had set for the fixed-fee contracts attracted mostly unskilled labor. On 28th of September the engineer called Hartman to inform him that they had 930 carpenters at Camp Edwards but that 1,000-1,500 more were needed. Camp Edward's relatively isolated, Cape Cod location meant there were not large numbers of local carpenters, and those in nearby Boston could not be obtained at the going rate.

In order to make the best use of the available labor, the Walsh Company introduced an innovative mass-production system to speed workers.[19] Construction crews were organized into two primary groups: one devoted to substructure work and the other to superstructure construction. Within these groups, thirty superintendents directed the work of separate crews. Larger crews had as many as nine assistant superintendents and forty-five foremen. A foreman was in charge of a standard work-crew that averaged fifteen personnel. Each crew has its own motor pool and timekeepers.

For efficiency, each superintendent constructed only one type of building through the project and each work crew performed only one repetitive operation. The foundation crews were followed by a crew that framed the first-floor deck and a crew that framed the walls. All walls were framed flat and in one-story buildings were sheathed and then raised into position. Two story walls were constructed in panels and raised before sheathing. The *Engineering News* report on Camp Edwards notes that on a single day, sixty-nine structures were framed in this manner, and that only the doors and window frames came to the camp prefabricated.[20] Crew superintendents would meet at the end of each work day to consult on progress, problems and material requisitions.[21] Thus, fewer skilled carpenters were needed in the production of the cantonments and, as a result, both time and budget constraints were overcome.

New employees were hired at a central area near the installation entrance and daily requests from group superintendents formed the basis for hiring. Payrolls were handled through a central office and to eliminate bottlenecks, and minimize lost labor time, cash disbursements were accomplished by armored cars that traveled to each construction area every Thursday. At the peak of construction, the employment totalled 18,593 personnel, and the payroll neared $1 million weekly.[22]

By the middle of December the camp was ready for occupation, with facilities for 30,000 troops, the largest Army post in New England. The soldiers of the 68th Coastal Artillery, followed by those of the 198th, who had spent the four months preceding in tents, were among the first to occupy the newly completed barracks. The first batch of selectees arrived on the 19th of December, and the famous Yankee Division of the Massachusetts National Guard--the chief component of the camp--arrived in January 1941. Meanwhile, the motor maintenance facilities and warehouses, the last of the cantonment buildings, were still being erected.[23]

Figure 39 *Automotive Shop, Camp Edwards.*

CONCLUSION

During the years of World War II, Camp Edwards was occupied by several major units and used for a variety of activities. In the first two years of the war, the 26th infantry and a portion of the American Division trained at Camp Edwards before embarking for Europe and the South Pacific. In 1941, the 101st Observation Squadron became the first unit to be stationed at Camp Edwards. The 14th Anti-Submarine Patrol Squadron operated from Otis Field, an airstrip within the camp boundaries, during 1941-45. From 1942-45, the Second Battalion, 64th Coastal Artillery Regiment (anti-aircraft) was stationed at Camp Edwards. Also during this period the Army Engineering Amphibious Command occupied Camp Edwards and utilized the beaches of Cape Cod, Martha's Vineyard and Nantucket to train troops for amphibious assault. From September through December of 1945, Camp Edwards was used as an outprocessing center for U.S. troops. During this period, over 11,000 enlisted men and officers came through the post.

From the close of World War II until the early 1950s, the Massachusetts Military Reservation (MMR) reverted to a low level of activity. In June of 1946, Camp Edwards was deactivated and phased out under caretaker status by the Army. From 1946-48, MMR was used primarily for training activities. In 1948, the USAF obtained control of Otis Field for an air defense mission and assignment of a fighter interceptor unit.

Camp Edwards was reactivated in 1950 to support the U.S. Army mission during the Korean conflict. From 1950-52, the Army training activity approached World War II levels. In 1952, the Army again returned to Camp Edwards to caretaker status. The USAF selected the facilities required to establish Otis Air Force Base, and these were subsequently transferred from the Department of the Army to the Department of the Air Force.

In 1973, the U.S. Army began withdrawal of its Camp Edwards garrison. The Massachusetts National Guard assumed operational control of Camp Edwards in February 1975 to provide inactive duty training and annual training for Army National Guard and Army Reserve units. The World War II temporary structures--situated on approximately 2,600 acres of the 19,417 acres of the entire installation--are, therefore, currently owned by the Commonwealth of Massachusetts and leased to the Department of the Air Force (Otis Air Force Base), the Department of the Army (Camp Edwards) and the Department of Transportation (Coast Guard).

NOTES:

1. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States* [volume in the series, United States Army in World War II: The Technical Services] (Washington D.C.: Office of the Chief of Military History, United States Army).

2. Fine and Remington p. 148.

3. It soon became apparent that this would not be enough. Increases and both wages and prices for building supplies in turn increased the estimated cost per man, making a third supplemental defense appropriation necessary in early October.

4. Ibid., pp. 149-50.

5. Ibid., p. 150.

6. Architect-Engineers Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941, Charles T. Main, Inc., Engineers, p. 35. (Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts).

7. Fine & Remington, p. 69.

8. Architect-Engineer's Report, p. 6.

9. Ibid., p. 19.

10. Fine & Remington, p. 211.

11. "Handling a 20,000 Man Crew on a Camp Job." Engineering News Record, Vol. 66, June 19, 1941, p. 68.

12. Ibid.

13. Architect-Engineer's Report, p. 12-13.

14. Ibid., pp. 83, 90.

15. "Handling a 20,000 Man Crew...," p. 68.

16. Architect-Engineer's Report, p. 37.

17. "Handling a 20,000 Man Crew...," p. 67.

18. Ibid., p. 68.

19. Ibid.

20. Ibid.

21. Ibid., p. 67.

22. Ibid.

23. "Edwards Celebrates First Birthday," *Camp Edwards Digest*, Vol. 1, No. 2, September 1941, p. 7.

HISTORIC AMERICAN BUILDINGS SURVEY

MITIGATION DOCUMENTATION

CAMP EDWARDS

Building T-1209
(Major Generals' Quarters)

Building T-1222
(Storehouse and Company Administration)

Building T-1229
(Storehouse and Company Administration - Double)

Building T-1233
(Recreation Building)

Building T-1240
(Officers' Mess 118 Man)

Building T-1242
(Enlisted Men's Mess - 170 Man)

Building T-1267
(Day Room)

Building T-1310
(Enlisted Men's Barracks with Lavatory)

Building T-1369
(Motor Repair Shop)

Building T-3599
(Motor Shed)

BUILDING T-1209

MAJOR GENERALS' QUARTERS

Figure 40. *General view of cottage, south front.*

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1209 (MAJOR GENERALS' QUARTERS)
HABS NO. MA-1290-A

Location: Building T-1209 is located approximately 400' due north of South Inner road in Block 12 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

U.S.G.S. Special Map, series V814SCPEDWARDS, 1977, (1200-1300 Blocks), Universal Transverse Mercator, Zone 19, SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE corner -370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Major Generals' Quarters

Present Use: Occupied during training

Significance: Building T-1209 is significant as a relatively unmodified representative of a 700 Series Major General's Quarters.[2] It represents one of six General's Quarters constructed as part of the original 1940 Camp Edwards cantonment and is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment. T-1290 is also the only remaining structure of this type now under the control of Camp Edwards. Its companion structures T-1208 and T-1210 are under the control of the Air Force.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1209 was initiated at the same time as the entire Camp Edwards cantonment. Construction at Camp Edwards began on September 12, 1940, and all essential facilities were completed by December 1, 1940.[3]

2. Architect: Col. Charles D. Hartman Quartermaster Corps, U.S. Army (later Brigadier General) and his staff produced and revised the 700 Series plans that were used in the construction of Building T-1209.[4] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1209 were Maj. Harold L. Algeo (C.E. Res.), Sept. 11 to Nov. 12, 1940; Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res.), Jan. 30, 1941, to completion.[5] The plans were further modified at Camp Edwards by the architectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[6]

CAMP EDWARDS, BUILDING T-1209 (MAJOR GENERALS' QUARTERS)
HABS NO. MA-1290-A (page 2)

3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a ninety-nine year lease with the Commonwealth of Massachusetts and developed the camp into adivision training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated as Otis Air Force Base. From 1954-74, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[7]

4. Builder, contractor, suppliers: Building T-1209 was part of Block 12 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa, was the builder/contractor. The contracts for the principal construction areas were fixed-fee. Cost estimates were prepared which itemized costs for each structure type complete with utilities and the contractors' fees.[8] The War Department purchased the lumber used in Building T-1209 under a bid system. The lumber was inspected independently by the Lumber Inspection Bureau Inc. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts, and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[9] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area, as was generally the case.

5. Original Plans and Construction: Building T-1209 was built from 700 Series plan number 700-301. The original elevations (Drawing 700-301) used to construct Building T-1209 are currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. The original cost of the building was $6,299.60.[10] Noted alterations to the original building plan at the time of construction include the use of 8"-round concrete piers instead of 8"-square foundation piers as specified in the 700 Series plans.

6. Alterations and additions: Major cosmetic alterations to the structure's interior and exterior include the installation of a new telephone service; the kitchen, bath and bedroom have been completely remodeled with new paneling and ceiling tiles. The American Standard toilet and Nash paper dispenser may represent the only remaining original fixtures. Fluorescent fixtures, smoke alarms, and fire extinguishers have been added. Central gas heating with overhead vents has replaced the original coal furnace system. The structure's exterior has been repainted white with blue trim. All windows and the front door have aluminum screens installed. The flooring consists of linoleum tiles, 12" square and is

a postwar alteration. The structure has acoustical tile ceilings, and the walls are finished with sheetrock and painted white, also postwar alterations.

B. Historical Context:

The construction of Building T-1209 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood frame buildings such as T-1209, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[11] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1209 is a 700 Series Major Generals' Quarters constructed in the main cantonment area of Camp Edwards mobilization cantonment built by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of World War II.

The post was named in honor of Major General Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" of the 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific. The 1200 and 1300 blocks of the camp were assigned to the 101st Infantry Regiment who arrived at the camp on July 10, 1941.[12]

When fully occupied, over 30,000 people lived in the cantonment area. The main cantonment area was organized as a square with a total of twenty-nine regimental blocks for infantry and artillery units. Outside the main cantonment additional blocks were constructed for the hospital, logistics, quartermaster depots, "colored" infantry, and service commands.

In its unaltered condition Building T-1209 illustrates the austere setting in which the basic infantry unit lived and trained before transfer to the combat arena. Even major ranking officers of the Army were not exempt from these measures. This is vividly illustrated in the small size and utilitarian nature of the structure.

CAMP EDWARDS, BUILDING T-1209 (MAJOR GENERALS' QUARTERS)
HABS NO. MA-1290-A (page 4)

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1209 is a relatively unaltered example of typical 700 Series, Major Generals' Quarters. The structure was built according to standard War Department plans and is an example of World War II mobilization construction which was built nation-wide. The 700-301 plans were used to house Brigadier Generals, and Regimental Commanders.

2. Condition of Fabric: The general condition of Building T-1209 is good. The structure is maintained and the exterior of the structure is relatively unmodified.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1209 is a rectangular building. The main structure measures 25'-6" wide x 18'-2" long with a 6'-6" x 9'-0" porch and a 15'-6" x 8'-4" rear kitchen wing. The height from grade to the roof ridge is approximately 14'.[13]

2. Foundations: The main area of building T-1209 rests on round concrete piers 10" in diameter. The foundations of the porch and furnace room rests on a concrete slab on grade. The structure has galvanized-iron termite shields between the foundation skirting and siding.

3. Walls: The exterior walls of Building T-1209 consist of three layers: wooden sheathing, black construction paper, and wooden cove-base siding. This is the standard system used throughout the cantonment. The exterior has wooden skirting covered with bituminous fabric and plywood skirting.

4. Structural System, framing: Building T-1209 is of light frame construction.

5. Porches, stoops: The structure has a covered front porch resting on a concrete slab on grade.

6. Openings:

a. Doorways and Doors: The design of all doors at Building T-1209 is similar, consisting of a standard design, four lights over three recessed panels. At the east front (entrance) and the north side (kitchen) there are single doors. There is a double-door entrance on the south side (furnace room): Both panels have been covered with plywood.

b. Windows: The windows are six-over-six-light double-hung sash. There are two windows on the east front, three on the west rear, and one each on the north and south sides.

CAMP EDWARDS, BUILDING T-1209 (Major GENERALS' QUARTERS)
HABS NO. MA-1290-A (page 5)

8. Roof:

a. Shape, covering: Building T-1209 has a low-pitched gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt roofing shingles with gray aggregate laid on 1"-thick sheathing supported by 2" x 8" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans:

a. Basement: The basement consist of a crawl space.

b. Main Floor: Building T-1209, as constructed in 1940 had a gross area of 460 square feet. The structure contains four main rooms, a bedroom, kitchen, bath and living area.

c. Attic: The attic contains the roof trusses and was not accessible at the time of inspection.

2. Stairways: None.

3. Flooring: The flooring consists of linoleum tiles, 12" square and is a postwar alteration.

4. Wall and ceiling finishes: The structure has acoustical tile ceilings, and the walls are finished with sheetrock and painted white. Both are postwar alterations.

5. Openings: There are two exterior wooden doors at Building T-1209. The front door consists of two-lights over four vertical panels. The exterior door to the boiler room is four-lights over three vertical panels; plywood now covers the exterior paneled portion. There are two interior wooden doors, one to the bedroom and one to the bathroom, consisting of five horizontal panels.

6. Decorative Trim: There is no decorative trim.

7. Hardware: The original door and window hardware are present for the boiler room entrance. All remaining hardware is new.

8. Mechanical Equipment:

a. Heating: The structure is presently heated with an American Standard natural gas furnace. Original heating was supplied by coal-fired furnace.

b. Kitchen appliances: All kitchen appliances are new.

CAMP EDWARDS, BUILDING T-1209 (Major GENERALS' QUARTERS)
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c. Ventilation: The structure is vented through the attic via screened vents in the ceiling. Two vents are located in the furnace room for the hot water and gas furnace. One vent is located in the bathroom.

d. Lighting: Current lighting needs are served through modern porcelain fixtures and fluorescent lighting. An original fixture is present in the furnace room. The structure has been rewired and all outlets and switches are new.

e. Plumbing: All plumbing is located in the furnace room and the bathroom The majority of the fixtures and piping appear to be new. Presently hot water is supplied through a gas fired Rudd "Enameline" pacemaker hot water heater. A 3" drain in the bathroom appears to be the only original plumbing in the structure.

D. Site:

1. General Setting and orientation: Building T-1209, and the other general officers quarters (T-1208, T-1210), are separated from the infantry cantonment in an area immediately east of block 12. Two additional structures were located to the north but have been razed. An unnamed road is located approximately 300' west of the structures.[14] There is an asphalt sidewalk leading to the structure entrance. The remainder of the building lot is relatively flat and planted in grasses. A cedar tree was planted on the north side of the structure sometime after World War II. An asphalt parking lot is located approximately 50' due east of the structures.

2. Historical Landscape Design: None noted.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1209 was built from 700 Series plan number 700-301. The original plans used to construct Building T-1209 were not present at Camp Edwards. Duplicates of the 700-301 series plans are currently on file at United States Army Construction Engineering Research Laboratory (USA-CERL).

B. Early Views: No construction photographs of Building T-1209 were located. Historic photographs of Camp Edwards construction were located in the Office of History, Fort Belvoir, VA.

C. Bibliography:

1. Primary and unpublished sources:

Standard Mobilization Drawings 700 Series Plan number 700-301.

CAMP EDWARDS, BUILDING T-1209 (MAJOR GENERALS' QUARTERS) HABS NO. MA-1290-A (page 7)

Real Property Records. Building and Structures, Facilities Engineers Building, Camp Edwards, Massachusetts.

Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Major Generals' Quarters Q-7 Drawing No. 301. p. 43, from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

Letter dated August 13, 1956, from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

2. Secondary and Published sources:

Lenore Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

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Diane Wasch and Perry Bush. "The Historical Context of World War II Mobilization Construction." Unpublished paper. National Park Service, Historic American Buildings Survey, Washington, DC., 1989.

CAMP EDWARDS, BUILDING T-1209 (MAJOR GENERALS' QUARTERS)
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D. Likely Sources Not Investigated:

1. Documentary: Additional information on the firms of Charles T. Main (architect engineers) and the Walsh Construction Company (contractors) may be available. Additional data may be available in the National Archives on Col. Charles D. Hartman (Later Brigadier General) and his staff who produced and revised the 700 Series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for personnel who may have worked at the installation.

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
Historical and Architectural Documentation Reports for Camp Edwards, Massachusetts
August 1990

PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Civil Engineering Research Laboratory (USA-CERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), Robert J. Kapsch, Chief, the National Park Service. The research was undertaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USA-CERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards Real Property Records on file, Facilities Engineers Office, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p. 148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

4. Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States.* United States Army in World War II. The technical Services. Center for Military History. Office of the chief of Military History, United States Army, Washington, D.C. (1972) pg. 69.

CAMP EDWARDS, BUILDING T-1209 (MAJOR GENERALS' QUARTERS)
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5. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts,. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

6. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, p. 148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

7. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

8. Architect-Engineers Report on Camp Edwards, Falmouth, Massachusetts, June 4, 1941. Charles T. Main, Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

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11. Letter dated August 13, 1956 from D.G. Aronberg of Welsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse Remington's, The Corps of Engineers: Construction in the United States. United States Army in World War II, The Technical Services. Center for Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

12. Architect-Engineers Report on Camp Edwards, Falmouth, Massachusetts, June 4, 1941. Charles T. Main, Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts, p. 35.

13. From "Standard 700 Series Drawing 301."

14. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

HISTORIC AMERICAN BUILDING SURVEY

INDEX TO PHOTOGRAPHS

CAMP EDWARDS, BUILDING T-1209,10,11 HABS NO. MA-1290-A
(MAJOR GENERALS' QUARTERS)
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-A-1 GENERAL VIEW OF SOUTH (FRONT)

MA-1290-A-2 GENERAL VIEW OF NORTH (REAR)

MA-1290-A-3 PERSPECTIVE VIEW OF SOUTH (FRONT) AND WEST SIDE

BUILDING T-1222

STOREHOUSE AND COMPANY ADMINISTRATION

Figure 41. *Perspective view of south (front) and west side.*

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1222 (STOREHOUSE AND COMPANY ADMINISTRATION) HABS NO.MA-1290-B

Location: Building T-1222 is located approximately 200' due north of South Inner road in Block 12 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

U.S.G.S. Special Map, series V814SCPEDWARDS, 1977, (1200-1300 Blocks), Universal Transverse Mercator: Zone 19, SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE corner -370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Storehouse and Company Administration.

Present Use: Vacant

Significance: Building T-1222 is significant as a relatively unmodified representative of a 700 Series Storehouse and Company Administration Building.[2] It represents one of seven storehouses constructed as part of the original 1940 Camp Edwards cantonment.[3] The structure is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1222 began at the same time as the entire Camp Edwards World War II cantonment. Construction at Camp Edwards began on September 12, 1940, and all essential facilities were completed by December 1, 1940.[4]

2. Architect: Col. Charles D. Hartman (Later Brigadier General) and his staff produced and revised the 700 Series Standard Drawings, Quartermaster Corps, U.S. Army, supervised the production and revision of the 1940, 700 Series plans that were used in the construction of Building T-1222.[5] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1222 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11 to Nov. 12, 1940; Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res.), Jan. 30, 1941 to completion.[6] The plans were used and modified at

Camp Edwards by the architectectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[7] In all, over six hundred 700 Series drawings were reviewed and approved for use on site by the general contractor.[8]

3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a 99-year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated as Otis Air Force Base. From 1954-74, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[9]

4. Builder, contractor, suppliers: Building T-1222 was part of Block 12 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa was the builder/contractor. The contracts for the principal construction areas were fixed-fee. Cost estimates were prepared which itemized costs for each structure type complete with utilities and the contractors' fees.[10] The War Department purchased the lumber used in Building T- 1242 using a bid system. The lumber was inspected independently by the Lumber Inspection Bureau Incorporated. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[11] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-1222 was built from 700 Series plan number 700-376. The original plan, Drawing 700-376, used to construct Building T-1222 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. The cost of the building was estimated at $3398.71.[12] Noted alterations to the building plan at the time of construction include the use of 8"-round concrete piers instead of 8"-square foundation piers as specified in the 700 Series plans.

6. Alterations and additions: None noted.

CAMP EDWARDS, BUILDING T-1222 (STOREHOUSE AND COMPANY ADMINISTRATION)
HABS NO.MA-1290-B (page 3)

B. Historical Context:

The construction of Building T-1222 was part of a massive, nationwide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood frame buildings such as T-1222, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[13] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1222 is a 700 Series Company Storehouse and Administration building constructed in the main cantonment area of Camp Edwards mobilization cantonment built by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Major General Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" of the 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific. The 1200 and 1300 blocks of the cantonment were occupied by the 101 Infantry on January 10, 1941.

When fully occupied, over 30,000 people lived in the cantonment area. The main cantonment area was organized as a square with a total of twenty-nine regimental blocks for infantry and artillery regiments. Outside the main cantonment additional blocks were constructed for the hospital, logistics, quartermaster depots,"colored" infantry, and service commands.

In its basically unaltered condition, Building T-1222 illustrates the logistics and support setting of the typical World War II cantonment. The large open area, the unfinished flooring and walls, the purely functional plumbing and electrical systems, illustrate the utilitarian function of this structure made necessary by the massive nationwide mobilization effort.

CAMP EDWARDS, BUILDING T-1222 (STOREHOUSE AND COMPANY ADMINISTRATION)
HABS NO.MA-1290-B (page 4)

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1222 is a relatively unaltered example of typical 700 Series, Storehouse and Company Administration building. The structure was built according to standard War Department 700 Series plans and is an example of World War II mobilization constuction Camp Edwards was the first of the mobilization camps constructed and was, therefore, a prototype for camps constructed nationwide. The project was so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[14]

2. Condition of Fabric: The general condition of Building T-1222 is good. There is some recent graffiti on the interior walls. The concrete slab floor is in good condition. The paint is peeling badly on the exterior. The sliding door into the supply room has been shorted with a stop made of a pipe filled with concrete.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1222 is a rectangular building with four entries. The main structure measures 39'-2" long x 25'-4" wide. The height from grade to the roof ridge is approximately 13'.[15] The structure is exactly one-half the length of building T-1229.

2. Foundations: Building T-1222 is of slab on grade construction. The foundation is in excellent condition with the exception of oil staining on the interior floor.

3. Walls: The exterior walls of Building T-1222 consist of three layers: wooden sheathing laid diagonally, black construction paper, and wooden cove base exterior siding, the standard system used throughout the cantonment. The walls consist of 5 1/16" tongue and groove boards nailed to 2" x 4" studs.

4. Structural System, framing: Building T-1222, and all 700 Series mobilization structures at the cantonment, are of light frame construction. The structure has a gable roof with a 5 to 12 slope and is covered by 3-tab asphalt shingles with gray aggregate. The structure differs from T-1229 in that T-1229 is a double (joined mirror images) version of this standard single storehouse.

5. Porches, stoops: The original wooden stoop at the north elevation has been replaced by concrete planks 11" wide x 4" thick by 5'-0" long.

6. Openings:

a. Doorways and Doors: There is one exterior wooden entry door to Building T-1222 consisting of a standard design of four lights over three recessed panels. The door has been repainted red over the original cream

paint and is peeling badly. The door has original hardware and a metal security plate over the lights. The shipping and receiving door is new andconsists of a sheet of plywood supported by new 2" x 6" support framing and new sliding frame hardware surface mounted to the structure exterior. This replaces the original sliding door that was composed of two layers of 1" x 6" boards laid vertically on the exterior and diagonally on the interior.

b. Windows: There are a total of nine, six-over-six-light double-hung sash windows. Two each on the west, north and south walls and three on the east wall. All windows have two locking bolts on the top and bottom. Paint is peeling on the exterior frames and some glazing has been broken and replaced. All have security mesh screening.

7. Roof:

a. Shape, covering: Building T-1222 is covered by gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt shingles with gray aggregate laid on 1" thick sheathing supported by 2" x 8" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans:

a. Basement: None.

b. Main Floor: Building T-1222, as constructed in 1940, had a gross area of 992 square feet. The main floor consists of a single bay containing the main storage area two small storage/administrative areas and a lavatory.

c. Attic: None. The entire volume of the storage bay is open to the roof line. The two smaller rooms have sheetrock wall and ceiling finishes.

2. Stairways: None.

3. Flooring: Concrete slab on grade.

4. Wall and Ceiling finishes: The walls and ceiling are unfinished.

5. Openings:

a. Doorways and Doors: There are three interior doors. All have five recessed panels. The door into the large bay has "Supply Room" stenciled in black paint over the top panel. The supply room door has had the original hardware replaced.

b. Windows: There are no decorative window surrounds. There are ventilation panels in the two smaller rooms and main bay.

6. Decorative Trim: Due to the austere nature of the construction there was no decorative trim.

7. Hardware: The original knob and lock sets in some of the doors and window bolt latches are present. The doors have butt hinges with three screws in each plate. The security screens appear original and have upper and lower padlocks made by Hurd Company of Detroit, Michigan. The bathroom hardware and electrical system appear original. A four-gallon fire extinguisher (pump type) is surface-mounted to the east wall of the main bay.

8. Mechanical Equipment:

a. Heating: None remaining. The northeast room has evidence of a former opening in the ceiling for a heating vent.

b. Ventilation: The structure is vented through wooden attic vents in the eaves. There are ceiling vents in the two smaller rooms. The bathroom had a screen vent into the main bay (now closed off).

c. Lighting: The original luminaires with porcelain enameled green and white) reflectors are present throughout the structure.

d. Plumbing: The bathroom has a small two-faucet sink (the hot water line was never installed). The toilet is white porcelain with a block "Olsonite" seat manufactured by American Standard Radiator and Sanitary Corporation made 12-3-40. The ventilation stack is black iron piping and vents directly upwards through the roof. The water system was shut off at the time of inspection.

D. Site:

1. General Setting and Orientation: Building T-1222 and the other buildings of Block 12 are located within the south quarter of the Camp Edwards square cantonment area. The building is located within a complex also containing additional barracks, day rooms, mess halls, administrative structures and logistics facilities.[16]

2. Historic Landscape Design: The building lot is relatively flat and planted in grasses. A sloped asphalt pad is located along the west elevation and was used as a loading ramp.

CAMP EDWARDS, BUILDING T-1222 (STOREHOUSE AND COMPANY ADMINISTRATION)
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PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1222 was built from 700 Series plan number 700-376. The original plan used to construct Building T-1222 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. Duplicates of the 700 Series plans for Company Administration Buildings Type SA-1 are also currently on file at the United States Army Construction Engineering Research Laboratory (USA-CERL).

B. Early Views: No construction photographs of Building T-1222 were located. Historic photographic views of Camp Edwards including construction photographs were located in the Office of History, Fort Belvoir, VA.

C. Bibliography:

1. Primary and unpublished sources:

Standard Mobilization Drawings 700 Series Plan number 700-376.

Real Property Records. Building and Structures, Facilities Engineers Building, Camp Edwards, Massachusetts.

Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Storehouse & Company Administration - SA-1, Drawing No. 700-376 (Single Building) p. 51 from Construction Costs Report, on file Building Camp Edwards, Massachusetts.

Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, The Corps of Engineer's: Construction in the United States. United States Army in World War II, the Technical Services. Center for Military

History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941, Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

2. Secondary and Published sources:

Lenore Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

K. Alan Snyder. *A Guide to Archival Sources for the Study of World War II Temporary Buildings*. Office of the Corps of Engineers, History Division, Washington, D.C., 1988.

Diane Wasch and Perry Bush. "The Historical Context of World War II Mobilization Construction." Unpublished paper. National Park Service Historic American Buildings Survey, Washington, DC., 1989.

D. Likely Sources Not Investigated:

1. Documentary: Additional information on the firms of Charles T. Main (architect engineers) and the Walsh Construction Company (contractors) may be available. Additional data may be available in the National Archives on Col. Charles D. Hartman and his staff who produced and revised the 700 Series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for civilian and military personnel who may have worked at the installation.

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
Historical and Architectural Documentation Reports for Camp Edwards, Massachusetts
August 1990

CAMP EDWARDS, BUILDING T-1222 (STOREHOUSE AND COMPANY ADMINISTRATION)
HABS NO.MA-1290-B (page 9)

PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Civil Engineering Research Laboratory (USA-CERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), Robert J. Kapsch, Chief, the National Park Service. The research was underaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USA-CERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Storehouse and Company Administration. Drawing No. 700-376. p. 31. from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

4. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

5. Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972) pg. 69.

6. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

7. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

8. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 17. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

9. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

10. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 6. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

CAMP EDWARDS, BUILDING T-1222 (STOREHOUSE AND COMPANY ADMINISTRATION)
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11. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941 Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts, p.83 and 90.

12. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Storehouse and Company Administration (Built Double) Drawing No. 700-376. p.19, from Construction Costs Report, on file Building Camp Edwards, Massachusetts.

13. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

14. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, The Corps of Engineers: Construction in the United States. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972)

15. From "Standard 700 Series Drawing 376."

16. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

HISTORIC AMERICAN BUILDING SURVEY

INDEX TO PHOTOGRAPHS

CAMP EDWARDS, BUILDING T-1222 HABS NO. MA-1290-B
(STOREHOUSE AND COMPANY ADMINISTRATION)
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-B-1 PERSPECTIVE VIEW OF SOUTH (FRONT) AND WEST SIDE

BUILDING T-1229

STOREHOUSE AND COMPANY ADMINISTRATION - DOUBLE

Figure 42 Exterior general view from southeast.

Figure 43 Interior view of south storage room with desk showing sliding door in closed position.

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1229 (STOREHOUSE AND COMPANY ADMINISTRATION-DOUBLE) HABS NO. MA-1290-C

Location: Building T-1229 is located approximately 150' due south of Beaman road in Block 12 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

U.S.G.S, Special Map, series V814SCPEDWARDS, 1977, (1200-1300 Blocks) Universal Transverse Mercator, Zone 19, SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE coner -370880E 4612700N, SE corner -370740E 4612360N

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Storehouse and Company Administration.

Present Use: Vacant.

Significance: Building T-1229 is significant as a relatively unmodified representative of a 700 Series Storehouse and Company Administration Building (Built Double).[2] It represents one of eighty-three double storehouses constructed as part of the original 1940 Camp Edwards cantonment.[3] The structure is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1229 was begun at the same time as the entire Camp Edwards World War II cantonment, on September 12, 1940, and all essential facilities were completed by December 1, 1940.[4]

2. Architect: Col. Charles D. Hartman Quartermaster Corps, U.S. Army (later Brigadier General) and his staff produced and revised the 700 Series plans that were used in the construction of Building T-1229.[5] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1229 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11 to Nov. 12, 1940); Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res.), Jan. 30, 1941, to completion.[6] The plans were used and modified at Camp Edwards by the architectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[7] In all, over six hundred standard 700 Series drawings were reviewed and approved for use on site by the general contractor.[8]

CAMP EDWARDS, BUILDING T-1229 (STOREHOUSE AND COMPANY ADMINISTRATION-DOUBLE)
HABS NO. MA-1290-C (page 2)

3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a 99-year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated as Otis Air Force Base. From 1954 to 1974, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[9]

4. Builder, contractor, suppliers: Building T-1229 was part of Block 12 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa was the builder/contractor. The contracts for the principal construction areas were fixed-fee. Cost estimates were prepared which itemized costs for each structure type complete with utilities and the contractors' fees.[10] The War Department purchased the lumber used in Building T-1242. The lumber was inspected independently by the Lumber Inspection Bureau Incorporated. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[11] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-1229 was built from 700 Series plan number 700-376 and 700-377. The original plan, Drawing 700-376, used to construct Building T-1229 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. The original cost of the building was estimated at $5719.80.[12] Noted alterations to the original building plan at the time of construction include the use of 8"-round concrete piers instead of 8"-square foundation piers as specified in the 700 Series plans.

6. Alterations and additions: The sliding door for the loading area has been replaced. Several rooms have been painted and there is a new faucet and water pipe in the supply room.

CAMP EDWARDS, BUILDING T-1229 (STOREHOUSE AND COMPANY ADMINISTRATION-DOUBLE)
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B. Historical Context:

The construction of Building T-1229 was part of a massive, nationwide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-1229, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[13] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1229 is a 700 Series Company Storehouse and Administration building constructed in the main cantonment area of Camp Edwards mobilization cantonment built by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Major General Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific. The 101st Infantry occupied cantonment blocks 1200 and 1300 on January 10, 1941.

When fully occupied, over 30,000 people lived in the cantonment area. The main cantonment area was organized as a square with a total of twenty-nine regimental blocks for infantry and artillery regiments. Outside the main cantonment additional blocks were constructed for the hospital, logistics, quartermaster depots,"colored" infantry, and service commands.

In its basically unaltered condition Building T-1229 illustrates a common logistics and support structure of a typical World War II cantonment. The large open area, the unfinished flooring and walls, the purely functional plumbing and electrical systems, illustrate the utilitarian function of this structure made necessary by the massive nationwide mobilization effort.

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1229 is a relatively unaltered example of typical 700 Series, Storehouse and Company Administration (Built Double)

CAMP EDWARDS, BUILDING T-1229 (STOREHOUSE AND COMPANY ADMINISTRATION-DOUBLE)
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structure. It is a example of World War II mobilization construction and was a prototype for plans used nation-wide. Built according to standard War Department 700 Series plans, Camp Edwards was the first of the mobilization camps constructed. The project was so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[14]

2. Condition of Fabric: The general condition of Building T-1229 is good. There is some recent graffiti on the interior walls. The concrete slab floor is in good condition. The paint is peeling badly on the exterior.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1229 is a rectangular building with four entries. The main structure measures 78'-4" long x 25'-4" wide. The height from grade to the roof ridge is approximately 13'.[15] The structure is exactly double the length and the same width as building T-1222.

2. Foundations: Building T-1229 is of slab-on-grade construction. The foundation is in excellent condition.

3. Walls: The exterior walls of Building T-1229 consist of three layers: wooden sheathing laid diagonally, black construction paper, and wooden cove base exterior siding, the standard system used throughout the cantonment. The walls consist of 5-1/16" tongue and groove boards nailed to 2" x 4" studs.

4. Structural system, framing: Building T-1229 and all 700 Series mobilization structures at the cantonment are of light frame construction. The structure has a gable roof with a slope of 5 to 12 and is covered with 3-tab asphalt shingles with gray aggregate. The structure differs from T-1222 in that this building is a double (joined mirror images) version of the standard single storehouse (T-1222).

5. Porches, stoops: The original stoops at the north elevation has been replaced by concrete slabs.

6. Openings:

a. Doorways and Doors: There are single wooden exterior entry doors on the east and west walls of Building T-1229 consisting of standard-design four lights over three recessed panels. Wood braces have been added to the door interiors. Both sliding doors (west elevation) are new and consist of sheets of plywood supported by new 2" x 6" support framing. New metal sliding frame tracks are surface-mounted to the structure exterior. These replace the original doors which were composed of two layers of 1" X 6" board laid diagonally on the interior and vertically on the exterior.

CAMP EDWARDS, BUILDING T-1229 (STOREHOUSE AND COMPANY ADMINISTRATION-DOUBLE)
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b. Windows: There are a total of fourteen, six-over-six-light, double-hung sash windows. Four on the west, six on the east, and two each on the north and south elevations. All windows have two locking bolts on the top and bottom. Paint is peeling on the exterior frames and some glazing has been broken and replaced. All except one have security mesh screening.

7. Roof:

a. Shape, covering: Building T-1229 is covered by a gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt roofing shingles with gray aggregate laid on 1" thick sheathing supported by 2" x 8" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans:

a. Main Floor: Building T-1229, as constructed in 1940, had a gross area of 1,984 square feet. The main floor consists of a single bay containing the two main storage areas separated by a wall composed of 2" x 4" studs to which are nailed 1" x 6" boards running from floor to ridge. Two storage/administrative areas and a lavatory at each end of the building.

b. Attic: None. The entire volume of the storage bay is open to the roof line. The two smaller rooms have sheetrock wall and ceiling finishes.

2. Stairways: None.

3. Flooring: The floor is slab-on-grade concrete.

4. Wall and Ceiling finishes: The walls and ceiling are unfinished with the exception of the northwest room which has been painted white (ceilings) and purple (walls).

5. Openings:

a. Doorways and Doors: There are five, five-panel wooden doors in the structure interior. The door into the large bay has "Supply Room" stenciled in yellow paint over the top panel. The supply-room door has had the original hardware replaced. The door between the supply room and administrative room on the west elevation has been replaced. There is an open doorway between the two main storage areas.

6. Decorative Trim: Due to the austere nature of the construction there was no decorative trim.

CAMP EDWARDS, BUILDING T-1229 (STOREHOUSE AND COMPANY ADMINISTRATION-DOUBLE)
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7. Hardware: The original knob and lock sets in the doors and window bolt latches are present. The doors have butt hinges with three screws in each plate. The washroom hardware and electrical system appear original. All light fixtures are original.

8. Mechanical Equipment:

   a. Heating: None remaining. One room in each half of the structure has a metal opening for a vent and a metal reflector to protect the wall from heat.

   b. Ventilation: There are ceiling vents in the two smaller rooms at the north and south walls. The bathroom had a screen vent into the main bay (now closed off).

   c. Lighting: The original luminaires with porcelain enameled (green and white) reflectors are present throughout the structure.

   d. Plumbing: The bathrooms have small two faucet sinks and toilets. The toilets are white porcelain manufactured by American Standard Radiator and Sanitary Corporation 12-4-1940. The ventilation stack is black iron piping and vents directly upwards through the roof. The water system was shut off at the time of inspection.

D. Site:

1. General Setting and orientation: Building T-1229, and the other buildings of Block 12, are located within the south quarter of the Camp Edwards square cantonment area. The building is located within a complex also containing additional barracks, day rooms, mess halls, administrative structures and logistics facilities.[16]

2. Historical Landscape Design: The building lot is relatively flat and planted in grasses. Two sloped asphalt pads are located along the west elevation and were used as loading ramps.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1229 was built from 700 Series plan number 700-376, and supplemented with associated plan number 700-377. Duplicates of the 700 Series plans for Storehouse and Company Administration Buildings Type SA-1 are currently on file at the United States Army Construction Engineering Research Laboratory (CERL).

B. Early Views: No construction photographs of Building T-1229 were located. Historical photographic views of Camp Edwards including construction photographs were located in the Office of History, Fort Belvoir, VA.

CAMP EDWARDS, BUILDING T-1229 (STOREHOUSE AND COMPANY ADMINISTRATION-DOUBLE)
HABS NO. MA-1290-C (page 7)

C. Bibliography:

1. Primary and unpublished sources:

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Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Storehouse & Co. Administration - S.A.-1 (Built Double). Drawing No. 700-376 from Construction Costs Report, on file Building Camp Edwards, Massachusetts.

Letter dated August 13, 1956, from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

2. Secondary and Published sources:

Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

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K. Alan Snyder. *A Guide to Archival Sources for the Study of World War II Temporary Buildings*. Office of the Corps of Engineers, History Division, Washington, D.C., 1988.

Diane Wasch and Perry Bush. "The Historical Context of World War II Mobilization Construction." Unpublished paper. National Park Service, Historic American Buildings Survey, Washington, DC., 1989.

D. Likely Sources Not Investigated:

1. Documentary: Additional information of the firms of Charles T. Main (architect engineers) and the Walsh Construction Company (contractors) may be available. Additional data may be available in the National Archives on Col. Charles D. Hartman and his staff who produced and revised the 700 Series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for civilian and military personnel who may have worked at the installation.

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
Historical and Architectural Documentation Reports for Camp Edwards, Massachusetts
August 1990

PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Civil Engineering Research Laboratory (USA-CERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Building 2urvey/Historic American Engineering Record (HABS/HAER), Robert J. Kapsch, Chief, the National Park Service. The research was underaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USA-CERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Storehouse and Company Administration. Drawing No. 700-376. p. 19. from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

CAMP EDWARDS, BUILDING T-1229 (STOREHOUSE AND COMPANY ADMINISTRATION-DOUBLE)
HABS NO. MA-1290-C (page 9)

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

4. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, VA.

5. Lenore Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972, p. 69.

6. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

7. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to Nov 1, 1941, p.148-149. Office of the Corps of Engineers, Engineer Historical Office, Fort Belvoir, VA.

8. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 17. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

9. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

10. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

11. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941 Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts. p.83 and 90

12. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Storehouse and Company Administration (Built Double) Drawing No. 700-376. p.19, from Construction Costs Report, on file Building Camp Edwards, Massachusetts.

13. Letter dated August 13, 1956, from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

14. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972)

15. From "Standard 700 Series Drawing 700-376."

16. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

HISTORIC AMERICAN BUILDING SURVEY

INDEX TO PHOTOGRAPHS

CAMP EDWARDS, BUILDING T-1233 HABS NO. MA-1290-C
(STOREHOUSE AND COMPANY ADMINISTRATION, DOUBLE)
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-C-1 EXTERIOR GENERAL VIEW FROM SOUTHEAST

MA-1290-C-2 PERSPECTIVE VIEW OF SOUTH AND EAST WALLS

MA-1290-C-3 INTERIOR VIEW OF NORTHWEST OFFICE, SOUTHEAST WALL

MA-1290-C-4 INTERIOR VIEW OF SOUTH STORAGE ROOM WITH DESK SHOWING SLIDING DOOR IN CLOSED POSITION

MA-1290-C-5 INTERIOR VIEW OF SOUTH STORAGE AREA SHOWING RAFTERS, WALL STUDS, AND SHEATHING

BUILDING T-1233

RECREATION BUILDING

Figure 44 *General view of north (front) and west side.*

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1233 (RECREATION BUILDING)
HABS NO. MA-1290-D

Location: Building T-1233 is located approximately 600' due north of South Inner road in Block 12 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

USGS, Special Map, series V814SCPEDWARDS, 1977, (1200-1300 Blocks) Universal Transverse Mercator, Zone 19, SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE corner -370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Recreation Building Type RB-1.

Present Use: Office Space for Weekend Reserve Training, Army National Guard

Significance: Building T-1233 is significant as a relatively unmodified representative of a 700 Series Recreation Building.[2] It represents one of twelve 700 Series Recreation Buildings constructed as part of the original 1940 Camp Edwards cantonment and is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1233 was begun at the same time as the entire Camp Edwards World War II cantonment. Construction at Camp Edwards began on September 12, 1940, and all essential facilities were completed by December 1, 1940.[3]

2. Architect: Col. Charles D. Hartman Quartermaster Corps, U.S. Army, (later Brigadier General) and his staff produced and revised the 700 Series plans that were used in the construction of Building T-1233.[4] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1233 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11 to Nov. 12, 1940; Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res.) Jan. 30, 1941, to completion.[5] The plans were used and modified at Camp Edwards by the architectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[6]

CAMP EDWARDS, BUILDING T-1233 (RECREATION BUILDING)
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3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a 99-year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated Otis Air Force Base. From 1954 to 1974, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[7]

4. Builder, contractor, suppliers: Building T-1233 was part of Block 12 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa was the builder/ contractor. The contracts for the principal construction areas were fixed fee. Cost estimates were prepared which itemized costs for each structures type complete with utilities and the contractors' fees.[8] The War Department purchased the lumber used in Building T-1233 using a bid system. The lumber was inspected independently by the Lumber Inspection Bureau Incorporated. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[9] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-1233 was built from 700 Series plan number 700-310. The original plan, Drawing 700-310, used to construct Building T-1233 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts.[10] The original cost of the building was estimated at $16,130.11.[11] The original plans called for the inclusion of two dressing rooms and a vestibule behind the stage, two coat rooms on either side, and an altar at the rear of the stage. At the front of the building was a heater room, an office and a projection room above the entrance. No alterations to the original building plan at the time of construction were noted. This structure differs from most World War II facilities at the camp in the use of specified 8" square foundation piers.

6. Alterations and additions: The interior of the structure has been modified to accommodate Army Reserve administrative functions. The interior, which once comprised one major space, has been divided into ten office areas with accompanying circulation. This space currently has two general functions--command level offices and general troop operation areas. Alterations to the structure's interior noted during the time of inspection included the removal of the stage and placement of partition walls to create office spaces. The partition

walls are 8'0" in height and do not extend to the ceiling. The partitions are covered with fiber board with a photo-woodgrain finish and a 1/2" x 3-1/2" chair rail. New 4" rubber cove base boards has been installed throught out the structure. The original store-room and office have been removed and replaced with lavatory facilities. The interior lighting has been upgraded to two-bulb fluorescent fixtures. The electrical system has been upgraded to include circuit breaker panels, grounded receptacles and two- and three-way lighting switches. Electrical conduit for supply has been surface mounted to the walls. The flooring has been replaced with new underlayment consisting of plywood covered with 9" lineoleum squares. New gas-fired ceiling blower units have replaced the original heating. Exterior modifications include the removal of the chimney stack (plinth remains intact), the door and window canopies have been universally removed, the rear stage door (north wall) has been covered over and the space re-sided, luminaires over the doorways have been upgraded, the exterior skirting has been covered with bituminous fabric and the original double doors to the entry (south wall) have been replaced with a single-leaf doorway.

B. Historical Context:

The construction of Building T-1233 was part of a massive, nationwide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood frame-buildings such as T-1233, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[12] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1233 is a 700 Series Recreation Building constructed in the main cantonment area of Camp Edwards mobilization cantonment built by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Major General Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific.

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When fully occupied, over 30,000 people lived in the cantonment area. The main cantonment area was organized as a square with a total of twenty-nine regimental blocks for infantry and artillery regiments. Outside the main cantonment additional blocks were constructed for the hospital, logistics, quartermaster depots, "colored" infantry, and service commands.

In its basically unaltered condition Building T-1233 illustrates the setting in which the basic infantry unit lived and trained before transfer to the combat arena. The original large open bay area, the unfinished flooring and walls, and the purely functional heating, ventilation, electrical systems all illustrate the utilitarian function of this structure made necessary by the massive nationwide mobilization effort.

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1233 is an example of a typical 700 Series, Recreation Building. The structure was built according to standard War Department plans and is an example of World War II mobilization construction and was a prototype for plans used nationwide. Built according to standard War Department 700 Series plans, Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[13]

2. Condition of Fabric: The general condition of Building T-1233 at the time of inspection was good. The structural members are in good condition, the flooring is serviceable, the exterior sheathing is not maintained and shows damage from weathering. The roof was recently shingled and appears in good condition. The original exterior cream paint and gray trim are peeling.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1233 is a rectangular building with three entries. The main structure measures 99'-7" long x 37'-6" wide. The height from grade to the roof ridge is approximately 25'.[14]

2. Foundations: The main area of building T-1233 rests on a system of square concrete outside piers and round secondary (interior) piers. All piers retain the stove-pipe casings used as concrete forms. The structure has copper termite shields between the foundation skirting and siding.[15]

3. Walls: The exterior walls of Building T-1233 consist of three layers: wooden sheathing laid diagonally, black construction paper, and horizontal interlocking wooden cove-lap siding, the standard system used throughout the cantonment[16]. The exterior has a wooden skirting covered with bituminous fabric surrounding the crawl space.

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4. Structural System, framing: Building T-1233 is of typical World War II platform-frame construction consisting of 2" x 8" joists, 16"-center, primary piers on a 9'-0" x 9'-0" grid and secondaries on a 4'-6" x 9'-3" grid. The structure has a gable roof with a 5 to 12 slope and is covered by 3-tab asphalt shingles with gray aggregate.

5. Porches, stoops: The original wooden stoops at all entries have been replaced by concrete planks 11" wide x 4" thick x 5'-0" long.

6. Chimneys: Only the chimney plinth remains. The brickwork is comprised of seven stretched courses with the eight being a header.

7. Openings:

a. Doorways and Doors: The design of all original wooden exterior doors at Building T-1233 is similar consisting of standard design of four lights over three recessed panels. The double door on the south wall has been replaced with a single entry door with single light over three recessed panels. One double-door entry on the east wall is present. On the west, there is a double-door entry to the boiler room. The double-door entry to the stage on the north has been removed and covered.

b. Windows: The east and west walls each have fourteen six-over-six light double-hung sash windows, which include four paired sets on each side. On the north, there are two, six-over-six-light double-hung sash windows. On the south, there is a single, six-over-six-light double-hung window. Some of the windows have the original screens in place. On the interior, locks have been installed to the sides of the windows.

8. Roof:

a. Shape, covering: Building T-1233 is covered by a gable roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt roofing shingles with gray aggregate laid on 1" thick sheathing supported by 2" x 8" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans:

a. Basement: The basement under Building T-1233 consist of a crawl space.

b. Main Floor: Building T-1233, as constructed in 1940, had a gross area of 3,663 square feet. The main floor consisted of a single bay containing the auditorium/recreation area and a stage. The original plans called for the inclusion of two dressing rooms and a vestibule behind the stage, two coat rooms on either side, and an altar at the rear of the stage. At the

CAMP EDWARDS, BUILDING T-1233 (RECREATION BUILDING)
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front of the building was a heater room, an office and a projection room above the entrance. All these rooms have been removed with exception of the heater room, office (now a washroom) and the projection room, now inaccessible.

c. Attic: The attic contains the roof trusses and served primarily to enhance ventilation. The ceiling is covered with fiberboard. The attic area was not accessible at the time of inspection.

2. Stairways: None are now present. Formerly, a stairway led from the office to the projection room.

3. Flooring: The flooring has been covered with plywood laminate and linoleum. No areas of the original flooring were visible at the time of inspection.

4. Wall and Ceiling finishes: The ceiling and walls are unfinished and painted white. The original fiberboard finish is present along exterior wall and the ceiling.

5. Openings:

a. Doorways and Doors: There are twelve interior doors constructed of hollow frame monolithic sheets. None are original.

b. Windows: There are no interior windows.

6. Decorative Trim: Due to the austere nature of the construction there was no decorative trim.

7. Hardware: The original knob and lock sets in some of the doors, and the window dead-bolt locks are present. The doors have butt hinges with three screws in each plate. No special hardware was observed.

8. Mechanical Equipment:

a. Heating: The orginal Lennox "Torid Zone Air Blast" coal-fired furnace (Serial No. AC735B) has been disabled and replaced by ceiling hung, gas-fired blowers. An electric heater is installed in the lavatory.

b. Ventilation: The structure is vented through ceiling ducts. The original return air vent is present in the ceiling. Five metal rooftop ventilators vent the attic space.

c. Lighting: Two original triangular, red-glass exit globes are at the exits of the transverse corridor (east and west walls). The remaining interior lighting has been replaced by fluorescent fixtures. Original green and white porcelain enameled reflectors are present in the boiler room.

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d. Plumbing: Two water coolers (non-original) are present in the interior. A ten-gallon electric water heater is present in the washroom. The washroom is a modification and contains two lavatories, two urinals, two stools and a slop sink.

D. Site:

1. General Setting and orientation: Building T-1233, and the other buildings of Block 12, are located within the south quarter of the Camp Edwards square cantonment area. The building is located within a complex also containing additional barracks, day rooms, mess halls and administrative structures.[17]

2. Historic Landscape Design: Asphalt walkways and roadways which serve as access for pedestrians and motorized traffic are still in existance. The remainder of the building lot is relatively flat and planted in grasses.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1233 was built from 700 Series plan number 700-310. The original plan (700-310) used to construct Building T-1233 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. Duplicates of the 700 Series plans for Recreation Building Type RB-1 are currently on file at the United States Army Construction Engineering Research Laboratory (USA-CERL).

B. Early Views: No construction photographs of Building T-1233 were located. Historical photographic views of Camp Edwards including construction photographs were located at the Office of History, Fort Belvoir, VA.

C. Bibliography:

1. Primary and unpublished sources:

Standard Mobilization Drawings 700 Series Plan numbers 700-310.

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Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

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D. Likely Sources Not Investigated:

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2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for civilian and military personnel who may have worked at the installation.

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Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
August 1990

PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), Robert J. Kapsch, Chief, the National Park Service. The research was underaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USACERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Recreation Building Type RB-1 Drawing No. 700-310. p. 41. from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

4. Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972) pg. 69.

5. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p.7. Manuscript on file, Facilities and Engineers Building Camp Edwards, Massachusetts.

6. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, VA.

7. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

8. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. pg. 6. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

CAMP EDWARDS, BUILDING T-1233 (RECREATION BUILDING) HABS NO. MA-1290-D (page 10)

9. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941 Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts, p.83 and 90.

10. A minor discrepancy exist between the Walsh Construction report and the Camp Edwards Real Property records in regard to the structure drawing numbers. The Real Property records note the structure as having been constructed with plan 700-378 (Day Room Type A-5), however these plans are for a much smaller structure type (see report on Building T-1267 this report.) The Walsh report states correctly that the plan number used was 700-310 (Recreation Building Type RB-1).

11. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Recreation Building Type RB-1 Drawing No. 700-310. p.47 from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

12. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

13. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

14. From "Standard 700-Series Drawing 310". Verified during field inspection.

15. From "Standard 700-Series Drawing 1163, Standard Details, Termite Shields."

16. This differs from Drawing 700-310 specifications which call for vertical lap siding.

17. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

HISTORIC AMERICAN BUILDING SURVEY

INDEX TO PHOTOGRAPHS

CAMP EDWARDS, BUILDING T-1233 (RECREATION BUILDING) HABS NO. MA-1290-D
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-D-1 GENERAL VIEW OF NORTH (FRONT) AND WEST SIDE

BUILDING T-1240

OFFICERS' MESS - 118 MAN

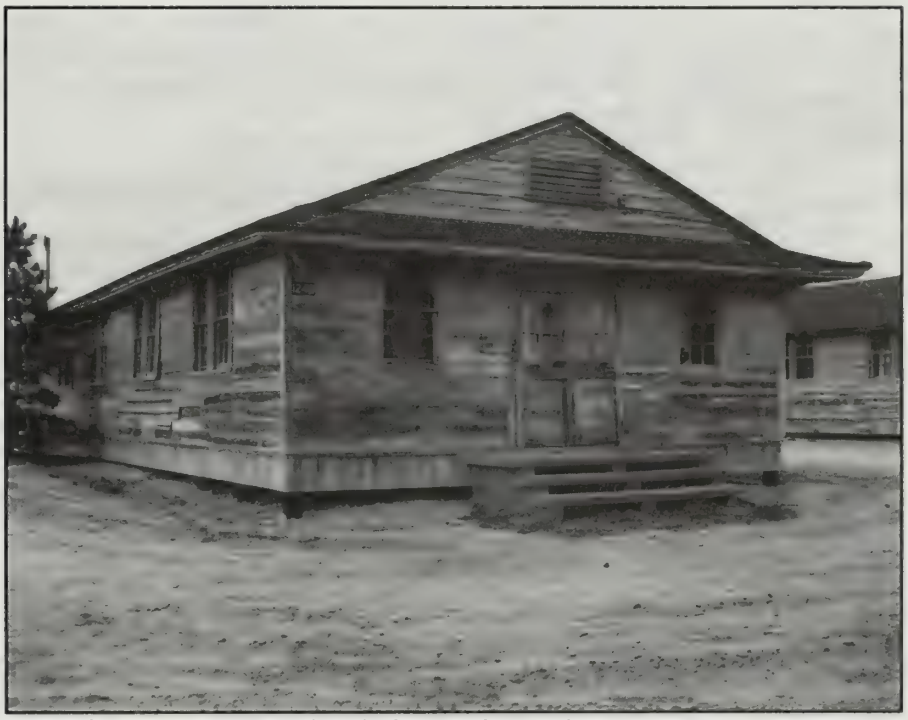

Figure 45 *Perspective view of south (front) and east side.*

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1240 (OFFICERS' MESS - 118 MAN)
HABS NO. MA-1290-E

Location: Building T-1240 is located approximately 100 feet due north of South Inner road in Block 12 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

U.S.G.S. Special Map, series V814SCPEDWARDS, 1977, Zone 19, Universal Transverse Mercator Coordinates: (1200-1300 Blocks): SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE corner -370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Officers' Mess - 118 man.

Present Use: Vacant

Significance: Building T-1240 is significant as a relatively unmodified representative of a 700 Series Officers' Mess.[2] It represents one of thirteen 700 series Officers' Mess halls constructed as part of the original 1940 Camp Edwards cantonment and is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1240 was begun at the same time as the entire Camp Edwards World War II cantonment. Construction at Camp Edwards began on September 12, 1940, and all essential facilities were completed by December 1, 1940.[3]

2. Architect: Col. Charles D. Hartman, Quartermaster Corps, U.S. Army (later Brigadier General) and his staff produced and revised the 700-series plans that were used in the construction of Building T-1240.[4] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1240 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11 to Nov. 12, 1940; Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res.), Jan. 30, 1941, to completion.[5] The plans were used and modified at Camp Edwards by the architectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[6]

CAMP EDWARDS, BUILDING T-1240 (OFFICERS' MESS, 118 MAN)
HABS NO. MA-1290-E (page 2)

3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a 99-year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated Otis Air Force Base. From 1954-74, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[7]

4. Builder, contractor, suppliers: Building T-1240 was part of Block 12 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa was the builder/contractor. The contracts for the principal construction areas were fixed fee. Cost estimates were prepared which itemized costs for each structures type complete with utilities and the contractors' fees.[8] The War Department purchased the lumber used in Building T-1240 using a bid system. The lumber was inspected independently by the Lumber Inspection Bureau Incorporated. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[9] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-1240 was built from 700-series plan number 700-1116 (Plans) and associated plan numbers 700-1128 (Elevations and Sections), 700-1129 (Miscellaneous Details), 700-1125 (Smoke Pipe and Heating Details), 700-1127 (Floor and Framing Plans), and 700-1118 (Miscellaneous Details). The original plan, Drawing 700-1116, used to construct Building T-1240 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. The original cost of the building was estimated at $6439.19.[10] Noted alterations to the original building plan at the time of construction include the use of 8"-round concrete piers instead of 8"-square foundation piers as specified in the 700 Series plans.

CAMP EDWARDS, BUILDING T-1240 (Officers' Mess - 118 MAN)
HABS NO. MA-1290-E (page 3)

6. Alterations and additions: All kitchen equipment and the interior partition walls separating the dining and food preparation areas have been removed. The interior has been painted white with black trim, and the original roof ventilators have been removed.

B. Historical Context:

The construction of Building T-1240 was part of a massive, nationwide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-1240, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[11] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1240 is a 700 Series Officers' Mess constructed in the main cantonment area of Camp Edwards mobilization cantonment built by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Major General Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific.

When fully occupied, over 30,000 people lived in the cantonment area. The main cantonment area was organized as a square with a total of twenty-nine regimental blocks for infantry and artillery regiments. Outside the main cantonment additional blocks were constructed for the hospital, logistics, quartermaster depots, "colored" infantry, and service commands.

In its basically unaltered condition Building T-1240 illustrates the setting in which the basic infantry unit lived and trained before transfer to the combat arena. The large open bay area, the unfinished flooring and walls, and the purely functional heating, ventilation, and electrical systems all illustrate the utilitarian function of this structure made necessary by the massive nationwide mobilization effort.

CAMP EDWARDS, BUILDING T-1240 (Officers' Mess - 118 MAN)
HABS NO. MA-1290-E (page 4)

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1240 is a relatively unaltered example of typical 700-series, Officers' Mess. Camp Edwards was a prototype for plans used nation-wide. Built according to standard War Department 700 Series plans, Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[12]

2. Condition of Fabric: The general condition of Building T-1240 is fair. The structural members are in good condition, and the flooring is serviceable. The exterior sheathing is not maintained and shows damage from weathering and high winds. The roof was recently shingled and appears in good condition. The flooring along the service line shows wear patterns from heavy traffic. The original exterior cream paint and gray trim are peeling.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1240 is a rectangular shaped building with four entries. The main structure measures 25'-9" wide x 93'-6" long.[13]

2. Foundations: The main area of building T-1240 rests on a system of round concrete piers with metal casings. The hearth in the kitchen rests on a concrete slab on grade. The structure has copper termite shields between the foundation skirting and siding.

3. Walls: The exterior walls of Building T-1240 consist of three layers: wooden sheathing, black construction paper, and wooden cove-base exterior siding, the standard system used throughout the cantonment. The exterior has wooden skirting covered with bituminous fabric.

4. Structural system, framing: Building T-1240 and all 700-series mobilization structures at the cantonment are of light frame construction. The structure has a straight gable roof and aqua medias along the east and west elevations. The structure differs from Building T-1242, primarily in door patterning, interior circulation patterns, the spacing of windows in the kitchen area, and a smaller concrete cooking surface.

5. Porches, stoops: The original stoops at all entries have been replaced by concrete planks 11" wide x 4" thick by 5'-0" long.

6. Openings:

a. Doorways and Doors: The design of all doors at Building T-1240 is similar consisting of standard-design four lights over three recessed

wooden panels. There are no interior doors in the structure. Three entries are present, two double door entries for personnel and supplies and a single door entry for the kitchen crew.

b. Windows: On the west wall there are two, six-over-six light, double-hung sash windows. On the east (kitchen), there are three fixed, nine-light windows. On the north, there are eleven, six-over-six light, double-hung sash windows. On the south, there are nine, six-over-six light, double-hung sash windows.

8. Roof:

a. Shape, covering: Building T-1240 is covered by a gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt roofing shingles with gray aggregate laid on 1" thick sheathing supported by 2" x 10" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans:

a. Basement: The basement under Building T-1240 consists of a crawl space.

b. Main Floor: Building T-1240, as constructed in 1940, had a gross area of 2,360 square feet. The main floor consists of a single bay containing the main dining area, and food preparation areas separated by a partition wall. The flooring along the food preparation and washing areas and the food service line show wear patterns from heavy traffic.

c. Attic: The attic contains the roof trusses and served primarily to enhance ventilation.

2. Stairways: None.

3. Flooring: The flooring consists of tongue and groove wood. Approximately 5% of the flooring has been replaced. A concrete pad measuring 8' x 9' x 4" is present in the kitchen area. The pad has a 7 1/2" floor drain and a 9" square perforated cover.

4. Wall and ceiling finishes: The ceiling and walls are unfinished and painted white and black. In the kitchen area, there are 7" pine, tongue and groove boards behind the stove area. Approximately 10 percent of the original fiberboard finish is present in the kitchen area.

5. Openings: None; interior partitions have been removed.

CAMP EDWARDS, BUILDING T-1240 (Officers' Mess - 118 MAN)
HABS NO. MA-1290-E (page 6)

6. Decorative Trim: Due to the austere nature of the construction there was no decorative trim.

7. Hardware: The original knob and lock sets are in the doors, and window dead-bolt locks are present. The doors have butterfly hinges with three screws in each plate. No special hardware was observed.

8. Mechanical Equipment:

   a. Heating: The structure was originally heated with two coal-fired stove in the serving area. Both have been removed.

   b. Kitchen appliances: All of the original appliances have been removed.

   c. Ventilation: The structure is vented through the attic through screened vents in the ceiling. Two screened wooden louvers at the front and rear elevations vent the attic space. New kitchen ventilation hoods and louvers were installed in all of the mess halls in 1942.[14]

   d. Lighting: The original pendulum luminaires with porcelain enameled, green and white reflectors are present throughout the structure.

   e. Plumbing: A floor drain in present in the kitchen area. The soil stack and drain from the slop sink are also present.

D. Site:

1. General Setting and orientation: Building T-1240 and the other buildings of Block 12 are located within the south quarter of the Camp Edwards square cantonment area. The building is located within a complex also containing additional barracks, day rooms, mess halls and administrative structures.

2. Historical Landscape Design: Asphalt walkways cover a rectilinear path around the structure. The remainder of the building lot is relatively flat and planted in grasses. A sloped concrete pad and exterior faucet is located along the north elevation and was probably used as a washing area for trash cans.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1240 was built from 700 Series plan number 700-1116, and supplemented with associated plan numbers 700-1128 (Elevations and Sections), 700-1129 (Miscellaneous Details), 700-1125 (Smoke Pipe and Heating Details), 700-1127 (Floor and Framing Plans), and 700-1118 (Miscellaneous Details). The original plan (Drawing 700-1116) used to construct Building T-1240 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. Duplicates of the 700 Series plans for

CAMP EDWARDS, BUILDING T-1240 (Officers' Mess - 118 MAN)
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Officers' Mess halls are currently on file at the United States Army Construction Engineering Research Laboratory (USACERL).

B. Early Views: No construction photographs of Building T-1240 were located. Historical photographic view of Camp Edwards including construction photographs were located at the Office of History, Fort Belvoir, VA.

C. Bibliography:

1. Primary and unpublished sources:

Standard Mobilization Drawings 700-series Plan number 700-1116, 700-1128, 700-1129,, 700-1125, 700-1127 and 700-1118.

Real Property Records. Building and Structures, Facilities Engineers Building, Camp Edwards, Massachusetts.

Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As of September 5, 1940 For 63-Man Barracks - With Lavatory Drawing No. 1165. p. 8. from Construction Costs Report, on file Facilities Engineers Building Camp Edwards, Massachusetts.

Letter dated August 13, 1956, from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

"New Ventilation Units for Edwards Kitchens". Camp Edwards Digest - Friday May 29, 1942, p.8, col 1. Vol.2, No. 5.

CAMP EDWARDS, BUILDING T-1240 (Officers' Mess - 118 MAN)
HABS NO. MA-1290-E (page 8)

2. Secondary and Published sources:

Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

K. Alan Snyder. *A Guide to Archival Sources for the Study of World War II Temporary Buildings*. Office of the Corps of Engineers, History Division, Washington, D.C., 1988.

Diane Wasch and Perry Bush. "The Historical Context of World War II Mobilization Construction." Unpublished paper. National Park Service Historic American Buildings Survey, Washington, DC., 1989.

D. Likely Sources Not Investigated:

1. Documentary: Additional information on the firms of Charles T. Main (architect engineers) and the Walsh Construction Company (contractors) may be available. Additional data may be available in the National Archives on Col. Charles D. Hartman (Later Brigadier General) and his staff who produced and revised the 700 Series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for civilian and military personnel who may have worked at the installation.

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
August 1990

PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Civil Engineering Research Laboratory (USA-CERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), Robert J. Kapsch, Chief, the National Park Service. The research was underaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USA-CERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

CAMP EDWARDS, BUILDING T-1240 (Officers' Mess - 118 MAN)
HABS NO. MA-1290-E (page 9)

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Officers Mess Drawing No. 1116. p. 35. from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, VA.

4. Lenore Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972) pg. 69.

5. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

6. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, VA.

7. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

8. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 6. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

9. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941 Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts, p.83 and 90.

10. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Officers Mess -118 Man Drawing No. 1116. p.35 from Construction Costs Report, on file facilities Engineers Building Camp Edwards, Massachusetts.

11. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

12. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, The Corps of Engineers: Construction in the United States [volume in the series, United States Army in World War II: The Technical Services] (Washington, D.C.: Office of the Chief of Military History, United States Army).

13. From "Standard-700 Series Drawing 1116."

14. "New Ventilation Units for Edwards Kitchens". Camp Edwards Digest - Friday May 29, 1942, p.8, col 1. Vol.2, No. 5.

HISTORIC AMERICAN BUILDING SURVEY

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CAMP EDWARDS, BUILDING T-1240 (OFFICERS' MESS - 118 MAN) HABS NO. MA-1290-E
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-E-1 PERSPECTIVE VIEW OF SOUTH (FRONT) AND EAST SIDE

MA-1290-E-2 PERSPECTIVE VIEW OF NORTH (REAR) AND WEST SIDE

BUILDING T-1242

ENLISTED MEN'S MESS - 170 MAN

Figure 46 *Perspective view of south (front) and west side.*

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN)
HABS NO. MA-1290-F

Location: Building T-1242 is located approximately 150' due north of South Inner road in Block 12 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

U.S.G.S. Special Map, series V814SCPEDWARDS, Massachusetts, (1200-1300 Blocks) Zone 19, Universal Transverse Mercator Coordinates: SW corner - 370440E 4612520N, NW corner -370580E 4612880N, NE corner -370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Enlisted Men's Mess - 170 man.

Present Use: Vacant

Significance: Building T-1242 is significant as a relatively unmodified representative of a 700 Series Enlisted Men's Mess.[2] It represents one of 143 170-man mess halls constructed as part of the original 1940 Camp Edwards cantonment. The structure is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment.[3]

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1242 was begun at the same time as the entire Camp Edwards World War II cantonment. Construction at Camp Edwards began on September 12, 1940, and all essential facilities were completed by December 1, 1940.[4]

2. Architect: Col. Charles D. Hartman (later Brigadier General), Quartermaster Corps, U.S. Army, supervised the production and revision of the 1940, 700 Series plans that were used in the construction of Building T-1242.[5] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1242 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11 to Nov. 12, 1940); Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res.), Jan. 30, 1941, to completion.[6] The plans were used and modified at Camp Edwards by the architectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[7]

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN)
HABS NO. MA-1290-F (page 2)

3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a ninety-nine year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated Otis Air Force Base. From 1954-74, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[8]

4. Builder, contractor, suppliers: Building T-1242 was part of Block 12 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa was the builder/contractor. The contracts for the principal construction areas were fixed-fee. Cost estimates were prepared which itemized costs for each structure type complete with utilities and the contractors' fees.[9] The War Department purchased the lumber used in Building T-1242 using a bid system. The lumber was inspected independently by the Lumber Inspection Bureau Incorporated. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[10] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-1242 was built from 700 Series plan number 700-1116 (Plans) and associated plan numbers 700-1128 (Elevations and Sections), 700-1129 (Miscellaneous Details), 700-1125 (Smoke Pipe and Heating Details), 700-1127 (Floor and Framing Plans), and 700-1118 (Miscellaneous Details). The original plan, Drawing 700-1116, used to construct Building T-1242 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. The original cost of the building was estimated at $6439.19.[11] Noted alterations to the original building plan at the time of construction include the use of 8"-round concrete piers instead of 8"-square foundation piers as specified in the 700 Series plans.

6. Alterations and additions: None noted.

B. Historical Context:

The construction of Building T-1242 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of

drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-1242, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[12] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1242 is a 700 Series Officers' Mess constructed in the main cantonment area of Camp Edwards mobilization cantonment built by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Major General Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific.

When fully occupied, over 30,000 people lived in the cantonment area. The main cantonment area was organized as a square with a total of twenty-nine regimental blocks for infantry and artillery regiments. Outside the main cantonment additional blocks were constructed for the hospital, logistics, quartermaster depots,"colored" infantry, and service commands.

In its basically unaltered condition Building T-1242 illustrates the setting in which the basic infantry unit lived and trained before transfer to the combat arena. The large open bay area, the unfinished flooring and walls, and the purely functional, ventilation, electrical systems all illustrate the utilitarian function of this structure made necessary by the massive nationwide mobilization effort.

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1242 is a relatively unaltered example of typical 700 Series, Enlisted Men's Mess. The structure was built according to standard War Department 700 Series plans and is an example of World War II mobilization construction. This building served as a prototype for plans used nation wide. Built according to standard War Department 700 Series plans, Camp Edwards was the first of the mobilization camps constructed. Moreover, the project was so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[13]

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN)
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2. Condition of Fabric: The general condition of Building T-1242 is poor. The structural members are in good condition, however the door jambs and window sills show extensive rotting. The flooring is serviceable, the exterior sheathing is not maintained and shows damage from weathering and high winds. Windows are broken and the rear stoop to the dining area has been removed. Raccoons have littered the food preparation area and bird droppings are present throughout the structure. The roof was recently shingled and appears in good condition. The flooring along the service line shows wear patterns from heavy traffic. The original exterior cream paint and gray trim are peeling.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1242 is a rectangular building with four entries. The main structure measures 25'-4" wide x 87'-2" long.[14]

2. Foundations: Building T-1242 rests on a system of round concrete piers with stove pipe. The hearth in the kitchen rests on a concrete slab on grade. The structure has copper termite shields with wooden hoods between the foundation skirting and siding.

3. Walls: The exterior walls of Building T-1242 consist of three layers: wooden sheathing, black construction paper, and wooden cove base exterior siding, the standard system used throughout the cantonment. The exterior has wooden skirting covered with bituminous fabric.

4. Structural System, framing: Building T-1242, and all 700 Series mobilization structures at the cantonment, are of light frame construction. The structure has a straight gable roof and no skirt roof (aqua medias). The structure differs from T-1240 in the absence of skirt roofs, types and position of doorways, the interior circulation pattern of the dining area, a larger concrete cooking surface in the kitchen, and window placement in the kitchen.

5. Porches, stoops: The original stoops at all entries have been replaced by concrete planks 11" wide x 4" thick x 5' long.

6. Chimneys: The structure does not have a chimney.

7. Openings:

a. Doorways and Doors: The design of all doors at Building T-1242 is similar, consisting of standard-design four lights over three recessed wooden panels. Three entries are present, one double-door entry for kitchen personnel and supplies and three single-door entries. Two of the single doors are transversely located on the north and south walls and directly access the service area. Wooden screens are present on both entrances.

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN)
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b. Windows: On the west wall there are two, six-over-six light, double-hung sash windows. On the east (kitchen) wall there are three, fixed nine- light windows. On the north, there are eleven, six-over-six light, double-hung sash windows. On the south, there are nine, six-over-six light, double-hung sash windows.

8. Roof:

a. Shape, covering: Building T-1242 is covered by a gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt roofing shingles with gray aggregate laid on 1" thick sheathing supported by 2" inch x 8" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans:

a. Basement: The basement under Building T-1242 consist of a crawl space.

b. Main Floor: Building T-1242, as constructed in 1940 had a gross area of 2,208 square feet. The main floor consists of a single bay containing the main dining area, and food preparation areas separated by a partition wall. The flooring in the food preparation and washing areas and the food service line show wear patterns from heavy traffic.

c. Attic: None; the entire volume of the mess hall is open to the roof line.

2. Stairways: None.

3. Flooring: The flooring in the dining area consists of tongue-and-groove wood. A concrete pad is present is the kitchen area. The pad has a 7 1/2" floor drain and a 9" square perforated cover. Remnants of red sheet linoleum are present in the kitchen area.

4. Wall and Ceiling finishes: The ceiling and walls are unfinished and painted white and green. In the kitchen area there are 7" pine, tongue and groove boards behind the stove area. Remnants of the original fiberboard finish are present in the kitchen cooking area.

5. Openings: There is one major opening between the dining and food-preparation areas in the form of a counter with a skirt suspended from the ceiling. There is one interior door in the structure accessing a storage room in the kitchen.

6. Decorative Trim: Due to the austere nature of the construction effort there was no decorative trim.

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN)
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7. Hardware: The original knob and lock sets in the doors and window dead bolt locks are present. The doors have butt hinges with three screws in each plate. Unidentified hardware hangers were observed attached to the windows and may represent holders for blackout shades.

8. Mechanical Equipment:

   a. Heating: A single stove pad is present in the dining area. The ceiling vent for the stove has been removed and covered.

   b. Kitchen appliances: The kitchen has a Gordon Separator made by the American Sink and Foundry Company (Model US-242 Racine, Wisconsin), a hot-water heater made by J.A. Zurn Manufacture Company, two slop sinks, two sinks with two faucets each made by Onis & Laughlin Steel Corporation of Pittsburgh, Pennsylvania, and a galvanized steel hood over the hot water heater painted olive drab.

   c. Ventilation: The structure is vented through wooden attic vents in the eaves. New kitchen ventilation hoods and louvers were installed in all of the mess halls in 1942.[15]

   d. Lighting: The original pendulum luminaires with porcelain enameled (green and white) reflectors are present throughout the structure.

   e. Plumbing: A floor drain is present in the kitchen area. The soil stack and drain from the slop sink are also present. Original sinks are in place. A faucet is located on the outside of the south wall. The water system was shut off at the time of inspection.

9. Original Furnishings: There is unfinished pine shelving and a baker's pantry in the store room.

D. Site:

1. General Setting and orientation: Building T-1242 and the other buildings of Block 12 are located within the south quarter of the Camp Edwards square cantonment area. The building is located within a complex also containing additional barracks, day rooms, mess halls and administrative structures.[16]

2. Historical Landscape Design: Asphalt walkways cover a rectilinear path surrounding structure. The remainder of the building lot is relatively flat and planted in grasses. A sloped concrete pad and exterior faucet is located along the north elevation and was probably used as a washing area for trash cans.

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN)
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PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1242 was built from 700 Series plan number 700-1116, and supplemented with associated plan numbers 700-1128 (Elevations and Sections), 700-1129 (Miscellaneous Details), 700-1125 (Smoke Pipe and Heating Details), 700-1127 (Floor and Framing Plans), and 700-1118 (Miscellaneous Details). The original plan, Drawing 700-1116, used to construct Building T-1242 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. Duplicates of the 700 Series plans for Enlisted Men's Mess Halls are currently on file at the United States Army Construction Engineering Research Laboratory (USA-CERL).

B. Early Views: No construction photographs of Building T-1242 were located. Historical photographic view of Camp Edwards including construction photographs were located at the Office of History, Fort Belvoir, VA.

C. Bibliography:

1. Primary and unpublished sources:

Standard Mobilization Drawings 700 Series Plan number 700-1116, 700-1128, 700-1129,, 700-1125, 700-1127 and 700-1118.

Real Property Records. Building and Structures, Facilities Engineers Building, Camp Edwards, Massachusetts.

Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Enlisted Men's Mess Hall. Drawing No. 1116, from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN) HABS NO. MA-1290-F (page 8)

Letter dated August 13, 1956, from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972)

"New Ventilation Units for Edwards Kitchens." Camp Edwards Digest - Friday May 29, 1942, p.8, col 1. Vol.2, No. 5.

2. Secondary and Published sources:

Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

K. Alan Snyder. *A Guide to Archival Sources for the Study of World War II Temporary Buildings*. Office of the Corps of Engineers, History Division, Washington, D.C., 1988.

Diane Wasch and Perry Bush. "The Historical Context of World War II Mobilization Construction." Unpublished paper, National Park Service Historic American Buildings Survey, Washington, DC., 1989.

D. Likely Sources Not Investigated:

1. Documentary: Additional information on the firms of Charles T. Main (architect engineers) and the Walsh Construction Company (contractors) may be available. Additional data may be available in the National Archives on Col. Charles D. Hartman (Later Brigadier General) and his staff who produced and revised the 700 Series standard drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for civilian and military personnel who may have worked at the installation.

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
August 1990

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN)
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PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), Robert J. Kapsch, Chief, the National Park Service. The research was underaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USACERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Enlisted Mens Mess. Drawing No. 1116. p. 36. from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, VA.

4. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, VA.

5. Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972) p. 69.

6. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

7. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, VA.

8. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

9. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts. p.6

10. Ibid. pp. 83, 90.

11. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Enlisted Mens Mess Drawing No. 1116. from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

CAMP EDWARDS, BUILDING T-1242 (ENLISTED MEN'S MESS - 170 MAN) HABS NO. MA-1290-F (page 10)

12. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

13. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941 Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

14. From "Standard 700-Series Drawing 1116."

15. "New Ventilation Units for Edwards Kitchens". Camp Edwards Digest - Friday May 29, 1942, p.8, col 1. Vol.2, No. 5.

16. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

HISTORIC AMERICAN BUILDING SURVEY

INDEX TO PHOTOGRAPHS

CAMP EDWARDS, BUILDING T-1242 HABS NO. MA-1290-F
(ENLISTED MEN'S MESS - 170 MAN)
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-F-1 PERSPECTIVE VIEW OF SOUTH (FRONT) AND WEST SIDE

MA-1290-F-2 PERSPECTIVE VIEW OF NORTH (REAR) AND WEST SIDE

BUILDING T-1267

DAY ROOM

Figure 47 Perspective view of south (front) and east side.

Figure 48 Interior view of main room showing two small offices in west end.

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1267 (DAY ROOM)
HABS NO. MA-1290-G

Location: Building T-1267 is located approximately 200' due south of Beaman Road in Block 12 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

U.S.G.S. Special Map, series V814SCPEDWARDS, 1977, (1200-1300 Blocks) Zone 19, Universal Transverse Mercator Coordinates: SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE corner -370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to the Department of the Army and Massachusetts Army National Guard.

Original Use: Day Room Type A-5

Present Use: Vacant

Significance: Building T-1267 is significant as a relatively unmodified representative of a 700-series Day Room.[2] It represents one of 177 700-series A-5 Day Rooms constructed as part of the original 1940 Camp Edwards cantonment and is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1267 was begun at the same time as the entire Camp Edwards World War II cantonment, on September 12, 1940, and all essential facilities were completed by December 1, 1940.[3]

2. Architect: Col. Charles D. Hartman (later Brigadier General), Quartermaster Corps, U.S. Army, supervised the production and revision of the 1940, 700-series plans that were used in the construction of Building T-1267.[4] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1267 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11, 1940 to Nov. 12, 1940; Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res), Jan. 30, 1941, to completion.[5] The plans were used and modified at Camp Edwards by the architectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[6]

CAMP EDWARDS, BUILDING T-1267 (DAY ROOM)
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3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a 99-year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated Otis Air Force Base. From 1954-74, Camp Edwards continued to function under the U.S. Army as a reserve training center, under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[7]

4. Builder, contractor, suppliers: Building T-1267 was part of Block 12 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa, was the builder/contractor. The contracts for the principal construction areas were fixed-fee. Cost estimates were prepared which itemized costs for each structure type, complete with utilities and the contractors' fees.[8] The War Department purchased the lumber used in Building T-1267. The lumber was inspected independently by the Lumber Inspection Bureau Incorporated. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts, and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[9] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-1267 was built from 700-series plan number 700-378, and associated plans. The original drawing used to construct Building T-1267 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts.[10] The original cost of the building was estimated at $4,646.84.[11] No alterations to the original building plan were noted at the time of construction.

6. Alterations and additions: The original wooden stoop has been replaced with concrete planks and the piping from the furnace room to the chimney has been removed.

B. Historical Context:

The construction of Building T-1267 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of

drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-1242, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[12] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1267 is a 700-series Day Room constructed in the main cantonment area of Camp Edwards, by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Major General Clarence Edwards, WWI commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" of the 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific.

When fully occupied, over 30,000 people lived in the main cantonment area which was organized as a square with a total of twenty-nine regimental blocks for the infantry and artillery. Outside the main cantonment additional blocks were constructed for the hospital, logistics, quartermaster depots, "colored" infantry, and service commands.

In its unaltered condition, Building T-1267 illustrates the setting in which the basic infantry unit lived and trained before being transferred to the combat arena. The original, large, open-bay area, the unfinished flooring and walls; and the purely functional heating, ventilation, and electrical systems, all illustrate the utilitarian function of this structure which was made necessary by the massive nation-wide mobilization effort.

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1267 is a relatively unaltered example of typical 700-series, Day Room. The structure was built according to standard War Department plans and is, therefore, an example of World War II mobilization construction, used nation-wide. Camp Edwards was the first mobilization camp constructed. The plans--which were revised on site by the arhcitect/engineers--were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[13]

2. Condition of Fabric: The general condition of Building T-1267 is good. The structural members are in good condition, the flooring is serviceable, the exterior

sheathing is not maintained and shows rot and damage from the weather. The roof was recently shingled and appears in good condition. The original exterior cream-colored paint and gray trim are peeling. The windows have been broken in the front door and the hole has been covered with particle board.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1267 is a rectangular-shaped building with two entries. The main structure measures 45'-2" wide x 25'-4" long.[14]

2. Foundations: Building T-1267 rests on a system of 8"-round concrete piers along the perimeter of the building, with secondary piers underneath the building. All piers have the original stove-pipe casings. The structure has copper termite shields between the foundation skirting and the siding.

3. Walls: The exterior walls of Building T-1267 consist of three layers: wooden sheathing, black construction paper, and interlocking wooden lap siding, the standard system used throughout the cantonment. There is wooden skirting covered with bituminous fabric.

4. Structural System, framing: Building T-1267 is of frame, platform construction consisting of 2" x 8" floor joists, 16" on-center.

5. Porches, stoops: The original stoops, located at all entries, have been replaced by concrete planks, 11" wide x 4" thick x 5'-0" long.

6. Chimneys: The original chimney and metal stack remain in place. The brickwork is laid in American bond (7:1). The piping from the furnace room to the chimney has been removed.

7. Openings:

a. Doorways and Doors: The design of all original exterior wooden doors on Building T-1267 is similar, consisting of four lights over three recessed panels. There are two entry doors to the structure, one on the west (main entry), and one on the south. A double-door entry to the furnace room is presently located to the north.

b. Windows: On the east wall there are two eight-over-eight-light, double-hung sash windows. On the north wall are six six-over-six-light, double-hung sash windows (two are paired). On the south, there are seven, six-over-six-light, double-hung sash windows (two are paired). There are no windows on the west. Four of the windows have the original screens in place. On the interior, locks have been installed to the side of the windows.

CAMP EDWARDS, BUILDING T-1267 (DAY ROOM)
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8. Roof:

a. Shape, covering: Building T-1267 is covered by a gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt shingles with gray aggregate laid on 1"-thick sheathing supported by 2" x 8" rafters, 2'-0" on center.

C. Description of the Interior:

1 Floor Plans:

a. Basement: The basement under Building T-1267 consists of a crawl space.

b. Main Floor: Building T-1267, as constructed in 1940, had a total area of 1,144 square feet. The main area consisted of a single room containing the recreation area. Two semi-private offices with a pass-through door between comprise the east third of the structure.

c. Attic: The attic contains the roof trusses and served primarily to enhance ventilation. The ceiling is covered with fiber board. The attic area is accessed by a scuttle hatch.

2. Stairways: None.

3. Flooring: The flooring has been covered with 3-feet wide, brown sheet-linoleum. No areas of the original flooring are currently visible.

4. Wall and Ceiling finishes: The ceiling and walls are unfinished, with exposed diagonal sheathing to a height of 5'-0". Fiber board is used to finish the wall. The interior is painted white with gray trim. The original fiber-board finish is present along the exterior walls and the ceiling. Tongue-and-groove boards are nailed to studs around the interior walls facing the furnace room.

5. Openings:

a. Doorways and Doors: There are three original five-panel doors, leading to the (two) office areas. The original three-panel screen door is present at the south entry.

b. Windows: There is no decorative window trim.

6. Decorative Trim: Due to the austere nature of the construction, no decorative trim was used.

7. Hardware: The original knob and lock sets in some of the doors, and the window dead-bolt locks, are present. The window bolts have corresponding drill holes set

in the sill at intervals which also served to adjust the window height. The doors have butt hinges.

8. Mechanical Equipment:

a. Heating: The original coal-fired furnace has been disconnected. Central heating is currently supplied through a ceiling duct and registers placed along the structure's center, with openings into each office space.

b. Ventilation: The structure is vented through ceiling ducts placed along the center of the interior. The original return air vent is present in the ceiling. Three metal roof-top ventilators are located in the attic. The roof-top vents are controlled by pull-chains with finger rings.

c. Lighting: There are nine, globe luminaires inside, and a single, exterior light over the entry. The original green and white porcelain-enameled reflector is present in the boiler room.

D. Site:

1. General Setting and orientation: Building T-1267, and the other buildings of Block 12, are located within the south quarter of the square cantonment. The building is located within a complex which also contains additional barracks, day rooms, mess halls and administrative structures.[15]

2. Historical Landscape Design: The site has asphalt walkways and roadways which served as access for pedestrians and motorized traffic. The remainder of the building lot is relatively flat and planted in grasses.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1267 was built from 700-series plan, number 700-378. The original drawing used to construct Building T-1267 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. Duplicates of the 700-series plans for Day Rooms Type A-5 are currently on file at the United States Army Construction Engineering Research Laboratory (USA-CERL).

B. Early Views: No construction photographs of Building T-1267 were located. General camp construction photographs were located at the Office of History, Fort Belvoir, Va.

C. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 700-series Plan number 700-378.

CAMP EDWARDS, BUILDING T-1267 (DAY ROOM)
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b. Real Property Records. Building and Structures, Facilities Engineers Building, Camp Edwards, Massachusetts.

c. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

d. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, pp. 148-149. (Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Virginia).

e. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. (Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts).

f. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

g. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Day Rooms, Drawing No. 700-378, p. 14., from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

h. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

2. Secondary and Published sources:

Lenore Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

K. Alan Snyder. *A Guide to Archival Sources for the Study of World War II Temporary Buildings*. Office of the Corps of Engineers, History Division, Washington, D.C., 1988.

Diane Wasch and Perry Bush. *The Historical Context of World War II Mobilization Construction*. Draft Document, National Park Service Historic American Buildings Survey, Washington, DC., 1989.

E. Likely Sources Not Investigated:

1. Documentary: Additional information on the firms of Charles T. Main (architect-engineers), and the Walsh Construction Company (contractors), may be available. Additional data may also be available in the National Archives on Col. Charles D. Hartman and his staff who produced and revised the 700-series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for civilian and military personnel who may have worked at the installation.

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
August 1990

PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), Robert J. Kapsch, Chief, the National Park Service. The research was underaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USACERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Recreation Building Type A-5 Drawing No. 700-378. p. 14, from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

CAMP EDWARDS, BUILDING T-1267 (DAY ROOM)
HABS NO. MA-1290-G (page 9)

4. Lenoir Fine and Jesse Remington. The Corps of Engineers: Construction in the United States. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972) pg. 69.

5. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

6. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

7. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

8. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. pg. 6. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

9. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941 Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts, p.83 and 90.

10. Camp Edwards Real Property records on file facilities Engineers building, Camp Edwards, Massachusetts.

11. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Day Room Type A-5 Drawing No. 700-378. p.14. From Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

12. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

13. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972)

14. From "Standard 700 Series Drawing 310". Verified during field inspection.

15. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

HISTORIC AMERICAN BUILDING SURVEY

INDEX TO PHOTOGRAPHS

CAMP EDWARDS, BUILDING T-1267 (DAY ROOM) HABS NO. MA-1290-G
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-G-1 PERSPECTIVE VIEW OF SOUTH (FRONT) AND EAST SIDE

MA-1290-G-2 PERSPECTIVE VIEW OF NORTH (REAR) AND WEST SIDE

MA-1290-G-3 INTERIOR VIEW OF MAIN ROOM SHOWING TWO SMALL OFFICES IN WEST END

MA-1290-G-4 INTERIOR VIEW OF MAIN ROOM SHOWING TWO SMALL OFFICES IN WEST END

BUILDING T-1310

ENLISTED MEN'S BARRACKS WITH LAVATORIES

Figure 49 *Perspective view of south (front) and east side.*

Figure 50 *Interior view of lower level main room showing north and west walls.*

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1310
(ENLISTED MENS' BARRACKS with LAVATORIES)
HABS NO. MA-1290-H

Location: Building T-1310 is located approximately 400' due north of South Inner Road in Block 13 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

U.S.G.S. Special Map, series V814SCPEDWARDS, 1977, (1200-1300), Universal Tranverse Mercator Coordinates: Zone 19, SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE corner -370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Enlisted Mens' Barracks with Lavatory

Present Use: Vacant

Significance: Building T-1310 is significant as a relatively unmodified representative of a 700-series 63-man barracks with lavatory.[2] It represents one of 471 700-series barracks constructed as part of the original 1940 Camp Edwards cantonment, and is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1310 was initiated at the same time as the entire Camp Edwards cantonment, on September 12, 1940, and all essential facilities were completed by December 1, 1940.[3]

2. Architect: Col. Charles D. Hartman (later Brigadier General) supervised the production and revision of the 1940, 700-series plans that were used in the construction of Building T-1310.[4] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1310 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11, 1940 to Nov. 12, 1940; Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res), Jan. 30, 1941, to completion.[5] The plans were used and modified at Camp Edwards by the architectural-engineering the firm of Charles T. Main Inc. of Boston, Massachusetts.[6]

CAMP EDWARDS, BUILDING T-1310
(ENLISTED MENS' BARRARKS with LAVATORIES)
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3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a 99-year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated Otis Air Force Base. From 1954-7, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[7]

4. Builder, contractor, suppliers: Building T-1310 was part of Block 13 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa was the builder/ contractor. The contracts for the principal construction areas were fixed-fee. Cost estimates were prepared which itemized costs for each structures type complete with utilities and the contractors' fees.[8] The War Department purchased the lumber used in Building T-1310. The lumber was inspected independently by the Lumber Inspection Bureau Incorporated. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts, and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[9] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-1310 was built from 700-series plan number 700-1165, and associated plan nos. 700-1166, 700-1167, 700-1168, 700-1169, 700-1170 (Plumbing), 700-1171 (heating), 700-1172 (electric). The original elevations, drawing no. 700-1165, used to construct Building T-1310 are currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. The original cost of the building was $12,815.[10] Noted alterations to the original building plan at the time of construction include the use of 8"-round concrete foundation piers instead of 8"-square piers as specified in the 700-series plans.

6. Alterations and additions: Changes to the original structure include the installation of plaster board on the second-floor ceiling, interior painting, electrical upgrades (porcelain luminaires), the coal boxes shown in the original plan have been removed and replaced with concrete pads, and copper piping has replaced some of the original lavatory plumbing.

CAMP EDWARDS, BUILDING T-1310
(ENLISTED MENS' BARRARKS with LAVATORIES)
HABS NO. MA-1290-H (Page 3)

B. Historical Context:

The construction of Building T-1310 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-1242, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[11] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1310 is a 700-series 63-man barracks constructed in the main cantonment area of Camp Edwards, by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Major General Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" of the 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific.

When fully occupied, over 30,000 people lived in the cantonment area, which was organized as a square with a total of twenty-nine regimental blocks for the infantry and artillery. Outside the main cantonment, additional blocks were constructed for the hospital, logistics, quartermaster depots, "colored" infantry, and service commands.

In its unaltered condition Building T-1310 illustrates the setting in which the basic infantry unit lived and trained before transfer to the combat arena. The large open-bay areas and NCO quarters, the unfinished flooring and walls, and the purely functional heating, ventilation, electrical systems and lavatories all illustrate the utilitarian function of this structure made necessary by the massive nation-wide mobilization effort.

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1310 is a relatively unaltered example of typical 700-series, 63-man barracks. The structure was built according to standard War Department plans and is an example of World War II mobilization

construction. Camp Edwards was the first of the mobilization camps constructed and, therefore, served as a protoype for plans used nation-wide. The plans--which were revised by the architectect-engineers--were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[12]

2. Condition of Fabric: The general condition of Building T-1310 is good to moderate. Maintenance is lacking, however, and areas of deterioration noted in the structure's exterior include rotting along the aqua media, and the original cream-colored paint and gray trim are peeling.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1310 is a rectangular building with two first-floor entries and second-floor fire escape. The main structure measures 29'-6" wide x 80'-0" long. The height, from grade to the roof ridge, is approximately 27'.[13] The same width also occurs in Building T-1129, a 74-man barrack recorded by HABS at Fort McCoy Wisconsin, the only difference in the two structures being the addition of a 10' bay in the 800 series[14].

2. Foundations: Building T-1310 rests on a system of thirty-one round concrete piers 8" in diameter. These piers retain the metal stove pipe used as forms for the concrete. The foundation of the boiler room rests on a 5" thick concrete slab on grade. The structure has copper termite shields between the foundation skirting and siding.[15]

3. Walls: The exterior walls of Building T-1310 consist of three layers: wooden sheathing laid diagonally, black construction paper, and wooden lap siding, the standard system used throughout the cantonment. There is wooden skirting covered with bituminous fabric.

4. Structural System, framing: Building T-1310, and all 700-series mobilization structures at the cantonment, are of frame, platform construction. A series of 2" x 4" studs appear at the bottom of the floor joist and were added to increase the stability of the framing system. An aqua media surrounds the building above the first-floor windows, and is only broken at the center of the west front by the balcony and fire escape. The roof projects 3'-0" from the wall and matches the 5 to 12 slope of the main roof. The main roof is a gable with pents added above the second-floor windows. These pents project 4'-0" and join the 3'-0" eaves at the corners. The roof and pents are covered with 3-tab asphalt shingles with gray aggregate. The gable ends have louvered vents with a drip cap above.

5. Porches, stoops: The original wooden stoops at the front and side entries have been replaced with concrete. A balcony is located on the second-floor front, and is used as a fire escape. The balcony is accessed by a ladder constructed with dimensioned lumber, mounted to the structure's exterior.

CAMP EDWARDS, BUILDING T-1310
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6. Chimneys: The chimney base is constructed of red brick laid in a running bond with Portland cement mortar and is 2'-10" square. It has a fire-clay flue lining 15" in diameter and rests on a 10" concrete footing.

7. Openings:

a. Doorways and Doors: The design of all wood doors on Building T-1310 is similar, consisting of four lights over three recessed panels. On the first-floor west entrance, and the south second-floor balcony entrance, there are single wooden doors. Double wooden doors service the boiler room on the north rear.

b. Windows: On the west front there are four eight-over-eight-light, double-hung sash windows. On the first-floor east wall, in the lavatory to the rear, there is a four-light casement window, and a two-light hopper window over the wash sinks, and one in the shower. On the second-floor of the east wall there are three windows in the upstairs Non-Commissioned Officers' quarters. On both the north and south walls, there are fourteen, eight-over-eight-light, double-hung sash windows. There is an additional two-light hopper window at the north wall for the shower.

8. Roof:

a. Shape, covering: Building T-1233 is covered by gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt shingles with gray aggregate laid on 1"-width sheathing supported by 2" x 6" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans:

a. Basement: The basement consists of a crawl space.

b. First and second floors: Building T-1310, as constructed in 1940, has a gross area of 4,720 square feet. Each floor has one main room for the enlisted men and two small rooms for Non-Commissioned Officers.

c. Attic: The attic contains the roof trusses and provides ventilation.

2. Stairways: There is a wood stairway to the second floor, to the south of the building. The stairway has rises fifteen steps, with a single step down from the squad room to the lavatory. A round wooden banister, supported by three wall mounts, runs along one side of the stairwell.

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(ENLISTED MENS' BARRARKS with LAVATORIES)
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3. Flooring: The flooring consists of brown roll linoleum 36" in width and is a post-World War II alteration.

4. Wall and ceiling finishes: The ceiling of the first floor is exposed, showing the floor joists and cross bridging of the second floor, and is unfinished and painted white. The walls are covered with diagonal sheathing and are painted green. The second-floor ceiling is finished with gypsum board and painted white. Small hatches in the ceiling provide ventilation through the attic. The paint is a post-World War II alteration.

5. Openings: There are no decorative window or doorway surrounds. Return air grills to the furnace room are present on the first and second floors.

6. Decorative Trim: There is no decorative trim.

7. Hardware: The original door and window hardware is present. A wood mop-drying rack is mounted at the south rear.

8. Mechanical Equipment:

   a. Heating: The structure is presently heated with natural gas. Heating was originally supplied by a Lennox "Torrid Zone" coal-fired furnace which was stoked by hand.[16]

   b. Ventilation: The structure is vented through the attic by screened vents in the second-floor ceiling. Two screened wooden louvers to the front and rear vent the attic space.

   c. Lighting: Original safety globes are present in the shower stall. Current lighting needs are served through modern porcelain fixtures and hanging bulbs in the Non-Commissioned Officers' quarters. The original green and white enameled reflectors are missing.

   d. Plumbing: All plumbing is located in the furnace room and the lavatory and shower area to the structure's rear. The majority of the fixtures and piping appear to be original. Presently hot water is supplied through a gas-fired 175-gallon tank. This replaces the original hot-water service provided by the coal-fired furnace.

D. Site:

1. General Setting and orientation: Building T-1310, and the other buildings of Block 13, are located within the south quarter of Camp Edwards' square cantonment area. The building is located within a complex also containing additional, identical barracks, day rooms, mess halls and administrative structures.[17]

CAMP EDWARDS, BUILDING T-1310
(ENLISTED MENS' BARRARKS with LAVATORIES)
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2. Historical Landscape Design: Asphalt walkways cover a rectilinear path which facilitates foot and vehicular traffic. The remainder of the building lot is relatively flat and planted in grasses.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1310 was built from 700-series plan number 700-1165, and supplemented with associated plans, nos. 700-1163 (termite shields), 700-1170 (Plumbing), 700-1171 (heating), and 700-1172 (electric). The original elevations (Drawing 700-1165) used to construct Building T-1310 were not present at Camp Edwards. Duplicates of the 700-series plans for 63 man barracks are currently on file at the United States Army Construction Research Laboratory (USA-CERL).

B. Early Views: No construction photographs of Building T-1310 were located. General camp construction photographs were located at the Office of History, Fort Belvoir, Virginia.

C. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 700-Series Plans, nos. 700-1163, 700-1165, 700-1165M, 700-1166, 700-1167, 700-1168, 700-1169, 700-1170, 700-1171, and 700-1172.

b. Real Property Records. Building and Structures, Facilities Engineers Building, Camp Edwards, Massachusetts.

c. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

d. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

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f. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army

National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

g. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As of September 5, 1940, For 63-Man Barracks With Lavatory, Drawing No. 1165. Construction Costs Report, p. 8, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

h. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

i. HABS report on Fort McCoy Building T-1129 (Barrack) HABS Number WI-308-1, James Glass Ph.D., September 1988.

2. Secondary and Published sources:

Lenore Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

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CAMP EDWARDS, BUILDING T-1310
(ENLISTED MENS' BARRARKS with LAVATORIES)
HABS NO. MA-1290-H (Page 9)

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
August 1990

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NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards Real Property Records on file, Facilities Engineers Office, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

4. Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972) pg. 69.

5. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

6. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

7. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

8. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941., pg. 6, Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

9. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941 Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts, p.83 and 90.

CAMP EDWARDS, BUILDING T-1310
(ENLISTED MENS' BARRACKS with LAVATORIES)
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10. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For 63-Man Barracks - With Lavatory Drawing No. 1165. p. 8. from Construction Costs Report, on file Facilities Engineers Building Camp Edwards, Massachusetts.

11. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

12. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construtcion in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972)

13.From "Standard 700 Series Drawing 1165"

14. Fort McCoy Building T-1129 (Barrack) HABS Number WI-308-1 page 5. James Glass Ph.D. September 1988.

15. Drawing 700-1163, Standard Details, Termite Shields.

16. Real property record, Building 1310, Facilities Engineers Building, Camp Edwards, Mass.

17.Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

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CAMP EDWARDS, BUILDING T-1310 HABS NO. MA-1290-H
(ENLISTED MEN'S BARRACKS WITH LAVATORY)
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-H-1 PERSPECTIVE VIEW OF SOUTH (FRONT) AND EAST SIDE

MA-1290-H-2 PERSPECTIVE VIEW OF NORTH (REAR) AND WEST SIDE

MA-1290-H-3 INTERIOR VIEW OF LOWER LEVEL MAIN ROOM SHOWING NORTH AND WEST WALLS

MA-1290-H-4 INTERIOR VIEW OF UPPER LEVEL MAIN ROOM SHOWING SOUTH AND EAST WALLS

BUILDING T-1369

MOTOR REPAIR SHOP

Figure 51 *Perspective view of north (front) and west side.*

Figure 52 *Interior detailed view of posts, braces, rafters and beams.*

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP)
HABS NO. MA-1290-I

Location: Building T-1369 is located approximately 100' due south of Beaman road in Block 13 within the south quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

U.S.G.S. Special Map, series V814SCPEDWARDS, 1977, (1200-1300 blocks), Zone 19, Universal Transverse Mercator Coordinates: SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE corner 370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Motor Repair Shop Type SP-2.

Present Use: Motor Vehicle Repair Shop

Significance: Building T-1369 is significant as a relatively unmodified representative of a 700-series Motor Repair Shop.[2] It represents one of thirty 700-series SP-2 Motor Repair Shop buildings constructed as part of the original 1940 Camp Edwards cantonment and is one of 112 remaining World War II structures in the 1200-1300 blocks of the cantonment.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1369 was begun at the same time as the entire Camp Edwards World War II cantonment, on September 12, 1940, and all essential facilities were completed by December 1, 1940.[3]

2. Architect: Col. Charles D. Hartman (later Brigadier General) Quartermaster Corps, U.S. Army, supervised the production and revision of the 1940, 700-series plans that were used in the construction of Building T-1369.[4] The Constructing Quartermasters at Camp Edwards during the construction of Building T-1369 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11, 1940 to Nov. 12, 1940; Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res), Jan. 30, 1941, to completion.[5] The plans were used and modified at Camp Edwards by the architectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[6]

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP)
HABS NO. MA-1290-I (page 2)

3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a 99-year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated Otis Air Force Base. From 1954-74, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[7]

4. Builder, contractor, suppliers: Building T-1369 was part of Block 13 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa, was the builder/ contractor. The contracts for the principal construction areas were fixed-fee. Cost estimates were prepared which itemized costs for each structure type, complete with utilities and the contractors' fees.[8] The War Department purchased the lumber used in Building T-1369 using a bid system. The lumber was inspected independently by the Lumber Inspection Bureau Inc. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts, and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[9] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-1369 was built from 700-series plan no. 700-314, and associated plans. The original plan used to construct Building T-1369 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts.[10] The original cost of the building was estimated at $11,913.21.[11] No alterations to the original building plan were noted at the time of construction.

6. Alterations and additions: The exterior of the structure has been modified to accommodate new electrically operated overhead doors in place of the original hinge doors. Aluminum storm windows and gutters have been added. A shed and covered entry have been added to the structure's rear. Screen openings in the interior ceiling have been covered, and the tool check-out window has been removed. The original north bay area has been converted to office space. The original luminaires have been replaced by fluorescent fixtures.

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP)
HABS NO. MA-1290-I (page 3)

B. Historical Context:

The construction of Building T-1369 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-1242, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[12] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1369 is a 700-series Motor Repair Shop constructed in the main cantonment area of Camp Edwards, built by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Maj. Gen. Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" of the 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific.

When fully occupied, over 30,000 people lived in the cantonment area. The main cantonment area was organized as a square with a total of twenty-nine regimental blocks for the infantry and artillery units. Outside the main cantonment, additional blocks were constructed for the hospital, logistics, quartermaster depots, "colored" infantry, and service commands

Building T-1369 illustrates the setting of one of the World War II cantonment logistics areas. The original large open-bay area, the unfinished flooring and walls, and the purely functional heating, ventilation, electrical systems, illustrate the utilitarian function of this structure, made necessary by the massive nation-wide mobilization effort.

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1369 is a typical 700-series, Motor Repair Shop. The structure was built according to standard War Department plans and is an example of World War II mobilization construction. Camp Edwards was the first of the mobilization camps constructed and, therefore, was a prototype for plans used nation-wide. The plans--as revised by the architect-engineers--were

so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[13]

2. Condition of Fabric: The general condition of Building T-1369 at the time of inspection was good. The structural members are in good condition and the flooring is serviceable. The exterior sheathing is not maintained and shows rot and other damage from weather. The roof appears in good condition.

B. Description of the Exterior:

1. Overall dimensions: Building T-1369 is a rectangular building to which two lean-tos have been added. There are three original personnel entries. The main structure measures 84'-0" long x 37'-0" wide. The north lean-to is 12'-0" wide x 39'-0" long. The south lean-to is 20'-0" wide x 39'-0" long. The height from grade to the roof ridge is approximately 20'.[14]

2. Foundations: Building T-1369 rests on an on-grade slab. The structure has copper termite shields between the foundation and siding.[15]

3. Walls: The exterior walls of Building T-1369 consist of three layers: wooden sheathing laid diagonally, black construction paper, and horizontal interlocking wooden lap siding, the standard system used throughout the cantonment[16].

4. Structural system, framing: Building T-1369 is of frame, platform construction. The structure has a gable roof with a 5 to 12 slope and is covered with 3-tab asphalt shingles with gray aggregate.

5. Porches, stoops: The structure is predominately at grade, raised only slightly to facilitate drainage.

6. Chimneys: The original chimney and metal stack remain, the brickwork is laid in American Bond (7:1).

7. Openings:

a. Doorways and doors: The design of all original exterior doors at Building T-1369 is similar, consisting of wooden five-panel doors. There are two entries each, on the west front and east rear, one enters into the work area and one, to the tool room. A four-over-three-light double door with recessed panels provides access to the furnace room. Two large aluminum overhead-roll doors have replaced the original hinged vehicle access doors.

b. Windows: The windows are six-over-six-light, double-hung sash. On the north and east wall, are two such windows; and on south, are four. Security mesh is installed on those windows accessing the tool room.

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP)
HABS NO. MA-1290-I (page 5)

8. Roof:

a. Shape, covering: Building T-1369 is covered by a gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt shingles with gray aggregate laid on 1"-thick sheathing, supported by 2" x 8" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans:

a. Basement: None.

b. Main Floor: Building T-1369, as constructed in 1940, had a gross area of 3,456 square feet. The main area contains the vehicle workshop, office, store room, and heater room. The original heater has been removed, and the heater room and store room have been joined and turned into additional office space.

c. Attic: The attic contains the roof trusses and served primarily to enhance ventilation. The attic area was not accessible.

2. Stairways: There is a surface-mounted ladder to a second-floor storage space above the office areas.

3. Flooring: The flooring is slab on grade. The tool room has been covered with a resilient flooring. There is striping painted on the floors to delineate traffic patterns.

4. Wall and Ceiling finishes: The walls are covered with sheet rock, and painted gray and white. The ceiling in the workshop is covered with the original fiber board and remains unpainted. The office areas have had suspended acoustic-tile ceilings installed. The original plans call for a ceiling in the workshop, only in the northern Zone, and for a ceiling in the office and store room areas in both the northern and southern Zones.

5. Openings:

a. Doorways and Doors: One original five-panel door remains at the bathroom entry. The doorways do not have decorative surrounds.

b. Windows: There is a pass-through tool window between the maintenance bay and the tool room. The windows do not have decorative surrounds.

6. Decorative Trim: Due to the austere nature of the construction there was no decorative trim.

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP)
HABS NO. MA-1290-I (page 6)

7. Hardware: The original knob and lock sets in some of the exterior doors and the window bolt-latches are present. The doors have butt hinges. Many of the original switch plates are still in place.

8. Mechanical Equipment:

   a. Heating: The original Lennox "Torrid Zone" coal-fired furnace has been removed and replaced by ceiling-hung gas-fired blowers.

   b. Ventilation: The structure is vented through ceiling ducts. The original return-air vent is present in the ceiling. Three metal rooftop ventilators vent the attic space.

   c. Lighting: Some of the original green and white porcelain-enameled fixtures are present in the structure's interior. The remaining interior lighting has been supplemented by fluorescent fixtures and task lighting.

   d. Plumbing: All the present plumbing appears to be later additions and is contained in the lean-to which houses the washroom. The one probable exception is that of an American Standard Radiator & Sanitary Co. No. 2 Type sink dated 12-4-40.

D. Site:

1. General Setting and orientation: Building T-1369 and the other buildings of Block 13 are located within the south quarter of the square cantonment area. The building is located within a fenced and paved compound containing vehicles, and outbuildings.[17]

2. Historical Landscape Design: To the west, asphalt walkways and roadways serve as access for pedestrians and motorized traffic. The remainder of the building lot is paved and fenced.

PART III. SOURCES OF INFORMATION

A. Architectural Drawings: Building T-1369 was built from 700-series plan number 700-314, and supplemented with associated plan number 700-314.1. The original plan (Drawing 700-314) used to construct Building T-1369 is currently on file in the Facilities Engineers Office at Camp Edwards, Massachusetts. Duplicates of the 700-series plan are currently on file at the United States Army Construction Engineering Research Laboratory (USA-CERL).

B. Early Views: No construction photographs of Building T-1369 were located. General camp construction photographs were located at the Office of History, Fort Belvoir, Virginia.

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP)
HABS NO. MA-1290-I (page 7)

C. Bibliography:

1. Primary and unpublished sources:

Standard Mobilization Drawings 700-Series Plan numbers 700-314 and 700-314.1.

Real Property Records. Building and Structures, Facilities Engineers Building, Camp Edwards, Massachusetts.

Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, pp. 148-49. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As of September 5, 1940 For Motor Repair Shop - Type SP-2 Drawing No. 700-314. pg. 36, from Construction Costs Report, on file Facilities Engineers Building Camp Edwards, Massachusetts.

Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

2. Secondary and Published sources:

Lenore Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

K. Alan Snyder. *A Guide to Archival Sources for the Study of World War II Temporary Buildings*. Office of the Corps of Engineers, History Division, Washington, D.C., 1988.

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP)
HABS NO. MA-1290-I (page 8)

Diane Wasch and Perry Bush. *The Historical Context of World War II Mobilization Construction*. Draft Document, National Park Service Historic American Buildings Survey, Washington, DC., 1989.

D. Likely Sources Not Investigated:

1. Documentary: Additional information on the firms of Charles T. Main and the Walsh Construction Company may be available. Additional data may be available in the National Archives on Col. Charles D. Hartman and his staff who produced and revised the 700-series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for civilian and military personnel who may have worked at the installation.

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
August 1990

PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), Robert J. Kapsch, Chief, the National Park Service. The research was underaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USACERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Motor Vehicle Repair Shop Type SP-2 Drawing No. 700-314. p. 36. from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP) HABS NO. MA-1290-I (page 9)

4. Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972) pg. 69.

5. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

6. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

7. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

8. Architects-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. pg. 9, Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

9. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941, Charles T. Main Inc. Engineers, Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts., p.83 and 90.

10. A minor discrepancy exist between the Walsh Construction report and the Camp Edwards Real Property records in regard to the structure drawing numbers. The Real Property records note the structure as having been constructed with plan 700-378 (Day Room Type A-5), however these plans are for a much smaller structure type (see report on Building T-1267 this report.) The Walsh report states correctly that the plan number used was 700-310 (Recreation Building Type RB-1).

11. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Motor Repair Shop Type RB-1 Drawing No. 700-314. p.36 from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

12. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

13. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972)

14. From "Standard 700 Series Drawing 314". Verified during field inspection.

15. From "Standard 700 Series Drawing 1163" entitled "Standard Details, Termite Shields"

16. This differs from Drawing 700-314 specifications which call for vertical board and batten siding.

17. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

HISTORIC AMERICAN BUILDING SURVEY

INDEX TO PHOTOGRAPHS

CAMP EDWARDS, BUILDING T-1369 (MOTOR REPAIR SHOP) HABS NO. MA-1290-I
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-I-1 PERSPECTIVE VIEW OF NORTH (FRONT) AND WEST SIDE SHOWING TWO OVERHEAD DOORS IN OPEN POSITION

MA-1290-I-2 PERSPECTIVE VIEW OF SOUTH (REAR) AND WEST SIDE

MA-1290-I-3 INTERIOR DETAILED VIEW OF POSTS, BRACES, RAFTERS, AND BEAMS

BUILDING T-3599

MOTOR SHED

Figure 53 Perspective view of nine-bay shed, north and east walls.

HISTORIC AMERICAN BUILDINGS SURVEY

CAMP EDWARDS, BUILDING T-3599 (MOTOR SHED)
HABS NO. MA-1290-J

Location: Building T-3599 is located approximately 100' due north of Gaffne Road in Block 35 within the west quarter of the Camp Edwards square cantonment, Bourne vicinity, Barnstable County, Massachusetts.[1]

USGS, series V814SCPEDWARDS, USGS Coordinates (1200-1300 Blocks) UTM: Zone 19, SW corner -370440E 4612520N, NW corner -370580E 4612880N, NE corner -370880E 4612700N, SE corner -370740E 4612360N.

Present Owner: Commonwealth of Massachusetts, leased to Department of the Army and Massachusetts Army National Guard.

Original Use: Motor Shed Type SD-17

Present Use: Bulk Goods Storage

Significance: Building T-3599 is significant as a relatively unmodified representative of a 700-series Motor Shed.[2] It represents one of three 700-series SD-17 Motor Sheds constructed as part of the original 1940 Camp Edwards cantonment.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-3599 was began at the same time as the entire Camp Edwards World War II cantonment, on September 12, 1940, and all essential facilities were completed by December 1, 1940.[3]

2. Architect: Col. Charles D. Hartman (later Brigadier General), Quartermaster Corps, U.S. Army, supervised the production and revision of the 1940, 700-series plans that were used in the construction of Building T-3599.[4] The Constructing Quartermasters at Camp Edwards during the construction of Building T-3599 were Maj. Harold L. Algeo, (C.E. Res.), Sept. 11, 1940 to Nov. 12, 1940; Capt. Carl M. Patee (QMC), Nov. 11 to Jan. 30, 1941; and Capt. Fred E. Robbins (Inf. Res), Jan. 30, to completion.[5] The plans were used and modified at Camp Edwards by the architectural-engineering firm of Charles T. Main Inc. of Boston, Massachusetts.[6] In all over six hundred 700-series drawings were reviewed and approved for use on site by the general contractor. Plans and specifications for special items for which U.S. Army drawings were not available (e.g., some utilities, utility structures, and buildings drawings) were drafted by the general contractor.[7]

3. Original and subsequent owners: In 1935, the Massachusetts State Legislature established the Massachusetts Military Reservation on Cape Cod as a training area for the National Guard. The Department of the Army entered a 99 year lease with the Commonwealth of Massachusetts and developed the camp into a division training area in 1940. In 1953, a portion of the camp was transferred to the Department of the Air Force for construction and maintenance of an airfield designated Otis Air Force Base. From 1954-74, Camp Edwards continued to function under the U.S. Army as a reserve training center under a permit from the U.S. Air Force. In 1973, base closures caused the Air Force to transfer Otis Air Force Base to the Massachusetts Air National Guard. The U.S. Coast Guard was issued a lease for portions of the installations, from the Commonwealth of Massachusetts in 1976. In 1979, the U.S. Army licensed its area at Camp Edwards to the Massachusetts Army National Guard. The World War II temporary structures under consideration in this report are presently under the control of the U.S. Army and the Massachusetts Army National Guard.[8]

4. Builder, contractor, suppliers: Building T-3599 was part of Block 35 of the Camp Edwards cantonment. The Walsh Construction Company of Davenport, Iowa, was the builder/ contractor. The contracts for the principal construction areas were fixed-price in nature. Itemized cost estimates were prepared for each structure type, complete with utilities and the contractors' fees.[9] The War Department purchased the lumber used in Building T-3599. The lumber was inspected independently by the Lumber Inspection Bureau Incorporated. Concrete was purchased from the Crystal Concrete Company of Braintree, Massachusetts, and the F.V. Lawrence Plant in Falmouth, Massachusetts. Test engineers were employed through the firm of Thompson and Litchfield Company of Boston.[10] Information on individual suppliers of other materials was not available. These were probably purchased from subcontractors in the area.

5. Original Plans and Construction: Building T-3599 was built from 700-series plan no. 700-372, and associated plan, no. 700-372.1. The original cost of the building was estimated at $13,895.54[11] No alterations to the original building plan at the time of construction were noted.

6. Alterations and additions: The structure has concrete-block walls in one of the bays.

B. Historical Context:

The construction of Building T-3599 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 700 Series, and the 800 Series that followed, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-1242, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. Camp Edwards was the first of the mobilization camps constructed. The plans were so successful that fifty sets of duplicate prints were

commissioned for use by other camp builders.[12] In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-3599 is a 700-series Motor Shed constructed in the main cantonment area of Camp Edwards mobilization cantonment built by the War Department in the fall and winter of 1940. Mobilization cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.

The post was named in honor of Maj. Gen. Clarence Edwards, World War I commander of the 26th Infantry Division. The camp was leased by the Department of the Army in 1940 and developed into a division training area. It was here that the famous "Yankee Division" of the 26th Infantry was first assembled and trained for overseas duty in Europe and the South Pacific.

When fully occupied, over 30,000 people lived in the cantonment area. The main cantonment area was organized as a square with a total of twenty-nine regimental blocks for the infantry and artillery units. Outside the main cantonment, additional blocks were constructed for the hospital, logistics, quartermaster depots, "colored" infantry, and service commands.

Building T-3599 illustrates the setting of one of the World War II cantonment logistics areas. The original large open-bay area, the unfinished flooring and walls, and the purely functional electrical system all illustrate the utilitarian function of this structure made necessary by the massive nation-wide mobilization effort.

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-3599 is a relatively unaltered example of a typical 700-series, Motor Shed. The structure was built according to standard War Department plans and is an example of World War II mobilization construction. Camp Edwards was the first of the mobilization camps constructed and was,therefore, a prototype for plans used nation-wide. The plans--as revised by the architect-engineers--were so successful that fifty sets of duplicate prints were commissioned for use by other camp builders.[13] The building was also designed to be used as a stable, with the addition of interior partitions for stalls, saddle racks and feed-storage bins.[14]

2. Condition of Fabric: The general condition of Building T-3599 at the time of inspection was poor. A portion of the north exterior wall has been removed or collapsed. The structural members are rotted, bay doors are missing. The concrete floor is in good condition.

CAMP EDWARDS, BUILDING T-3599 (Motor Shed)
HABS NO. MA-1290-J (page 4)

B. Description of the Exterior:

1. Overall Dimensions: Building T-3599 is a rectangular building. The structure measures 102'-0" long x 46'-0" wide. The height from grade to the roof ridge is approximately 19'.[15]

2. Foundations: Building T-3599 rests on a concrete slab, on grade.

3. Walls: The exterior walls of Building T-3599 consist of a single layer of vertical tongue and groove siding.

4. Structural System, framing: Building T-3599 is of post-and-beam construction. Fifty 6" x 6" posts, with the aid of braces, support purlins, which in turn support common rafters to which wood sheathing is nailed. This is covered by bituminous fabric. The structure has a gable roof with a slope of 3 to 12.

5. Porches, stoops: The structure is predominately at grade, raised only slightly to facilitate drainage.

6. Openings:

a. Doorways and Doors: There are single entry doors on the south wall, consisting of four-lights over three recessed panels. There are nine wooden, paired, bay doors on the east and west, consisting of two stiles, two rails and two cross battens to which are nailed 1" x 10" boards laid diagonally.

b. Windows: None.

8. Roof:

a. Shape, covering: Building T-3599 is covered by a gabled roof with a slope of 5 to 12. Roofing materials consist of 3-tab asphalt shingles with gray aggregate, laid on 1"-thick sheathing supported by 2" x 8" rafters at 2'-0" on center.

C. Description of the Interior:

1. Floor Plans: The structure is a drive-through, multi-bay vehicle shed. The only intrusions to the main bay are the twenty-four 6" x 6" columns in eight rows of three each, for roof support.

a. Basement: None.

b. Main Floor: Building T-3599, as constructed in 1940, had a gross area of 4,692 square feet. The main area consisted of a single bay containing the vehicle shed and tool room. The tool room is walled off and has a storage

area atop it accessed by a short surface-mounted ladder.

c. Attic: None. The entire interior of the structure is open to the roof line.

2. Stairways: None.

3. Flooring: The flooring consists of a slab, on grade.

4. Wall and Ceiling finishes: There is interior finish, the structural framing is exposed.

5. Openings:

a. Doorways and Doors: There are nine, double bays on both the east and west walls, located transversely to facilitate the movement of vehicles into and out of the structure. There is a five-panel door to the tool room.

b. Windows: None.

6. Decorative Trim: Due to the austere nature of the construction there was no decorative trim.

7. Hardware: The original large strap hinges on the bay doors are present. The tool-room door has original hardware and butt hinges. The tool-room area is surrounded by a collapsible metal lattice security screen.

8. Mechanical Equipment:

a. Heating: No heating facilities are now present. Two openings present on the south may have been vent holes for heaters.

b. Lighting: Some original green and white porcelain-enameled fixtures are present in the structure's interior.

D. Site:

1. General Setting and orientation: Building T-3599, and the other buildings of Block 35, are located within the west quarter of the square cantonment area. The building is located within a compound that originally contained the quartermaster regiment for the camp.[16]

2. Historical Landscape Design: To the east there are asphalt parking areas and roadways which serve as access for pedestrians and motorized traffic. The area immediately west of the structure is wooded.

CAMP EDWARDS, BUILDING T-3599 (Motor Shed)
HABS NO. MA-1290-J (page 6)

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-3599 was built from 700-series plan number 700-372, and supplemented with associated plan number 700-372.1. Duplicates of the 700-series plans for the structure are currently on file at the United States Army Construction Research Laboratory the United States Army Construction Engineering Research Laboratory (USA-CERL).

B. Early Views: No construction photographs of Building T-3599 were located. General camp construction photographs were located at the Office of History, Fort Belvoir, Virginia.

C. Bibliography:

1. Primary and unpublished sources:

Standard Mobilization Drawings 700-series Plan number 700-372 and 700-372.1.

Real Property Records. Building and Structures, Facilities Engineers Building, Camp Edwards, Massachusetts.

Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of April 28, 1941 For Motor Sheds - 18 Bays, Type S.D.-17 700-372, Revised Plan 83 and 83A from Construction Costs Report page 36, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States.*

CAMP EDWARDS, BUILDING T-3599 (Motor Shed)
HABS NO. MA-1290-J (page 7)

United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

General Building Plan, Camp Edwards, 1940, Charles T. Main Engineers. Drawing 911-101, on file Camp Edwards Facilities Engineers Office.

2. Secondary and Published sources:

Lenoir Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C., 1972.

K. Alan Snyder. *A Guide to Archival Sources for the Study of World War II Temporary Buildings*. Office of the Corps of Engineers, History Division, Washington, D.C., 1988.

Diane Wasch and Perry Bush. *The Historical Context of World War II Mobilization Construction*. Draft Document, National Park Service Historic American Buildings Survey, Washington, DC., 1989.

D. Likely Sources Not Investigated:

1. Documentary: Additional information on the firms of Charles T. Main (architect engineers) and the Walsh Construction Company (contractors) may be available. Additional data may be available in the National Archives on Col. Charles D. Hartman (Later Brigadier General) and his staff who produced and revised the 700-series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction at Camp Edwards and the military records and local area could be searched for civilian and military personnel who may have worked at the installation.

Prepared by: Keith Landreth, Richard Hayes, Daniel R. Lapp, James Bowman, and Steve Turner
United States Army Construction Engineering Research Laboratory
August 1990

CAMP EDWARDS, BUILDING T-3599 (Motor Shed)
HABS NO. MA-1290-J (page 8)

PART IV. PROJECT INFORMATION:

The documentation of Camp Edwards, Massachusetts, was undertaken as mitigation documentation by the United States Army, Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. The documentation was done to the standards of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), National Park Service, Robert J. Kapsch, Chief. The research was underaken by Keith Landreth, Daniel R. Lapp, James Bowman, and Steve Turner of USACERL on site at Camp Edwards during the summer of 1990. The large-format photography was done by Martin Stupich.

NOTES:

1. Base Layout Plan, Otis Air National Guard, Camp Edwards, U.S. Coast Guard, Scale 1:400, revised January 1983, Camp Edwards Facilities Engineers Office.

2. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Motor Shed Type SD-17 Drawing No. 700-372. p. 37. from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

3. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

4. Lenore Fine and Jesse Remington. *The Corps of Engineers: Construction in the United States.* United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972) pg. 69.

5. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 7. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

6. Report on the Activities of the Construction Division. War Department, Office of the Quartermaster General, Construction Division, July 1, 1940 to November 1, 1941, p.148-149. Manuscript on file Office of the Corps of Engineers, Engineer Historical Division, Fort Belvoir, Va.

7. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. Charles T. Main Inc. Engineers. p. 17. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

8. Camp Edwards Military Reservation, Bourne, Massachusetts. Master Plan, January 1984, Revised February 1985. Massachusetts Army National Guard, Directorate of Facilities Engineering, Boston, Massachusetts.

9. Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941. pg.9, Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

10. Ibid. p.83 and 90

11. Camp Edwards, Falmouth Massachusetts, Walsh Construction Co., General Contractors. Estimated Cost As Of September 5, 1940 For Motor Shed Type SD-17 Drawing No. 700-372. p.37 from Construction Costs Report, on file Facilities Engineers Building, Camp Edwards, Massachusetts.

CAMP EDWARDS, BUILDING T-3599 (MOTOR SHED)
HABS NO. MA-1290-J (page 9)

12. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, *The Corps of Engineers: Construction in the United States*. United States Army in World War II, The Technical Services. Center of Military History. Office of the Chief of Military History, United States Army, Washington, D.C. (1972).

13. Letter dated August 13, 1956 from D.G. Aronberg of the Walsh Construction Company to Mr. August G. Sperl concerning a review of Lenore Fine and Jesse A. Remington's, Architect-Engineer's Report on Camp Edwards, Falmouth, Massachusetts. June 4, 1941 Charles T. Main Inc. Engineers. Manuscript on file, Facilities Engineers Building, Camp Edwards, Massachusetts.

14. From "Standard 700 Series Drawing 372.2" entitled "Stable - (Motor Vehicle Shed Type SD-17) Details of Stalls & Accessories"

15. From "Standard 700 Series Drawing 372.1". Verified during field inspection.

16. General Building Plan, Camp Edwards, 1940, Charles T. Main Engineers. Drawing 911-101, on file Camp Edwards Facilities Engineers Office.

HISTORIC AMERICAN BUILDING SURVEY

INDEX TO PHOTOGRAPHS

CAMP EDWARDS, BUILDING T-1369 (MOTOR SHED) HABS NO. MA-1290-J
Bourne vicinity
Barnstable County
Massachusetts

Martin Stupich, photographer

MA-1290-J-1 PERSPECTIVE VIEW OF NINE-BAY SHED, NORTH AND EAST WALLS

PART III

FORT MCCOY:

AN 800 SERIES CANTONMENT

by James Glass, Ph.D.

with contributions
by Keith Landreth, et al.

Figure 54 Historic view: Entrance to Camp McCoy.

OVERVIEW

During the course of six months in 1942, Camp McCoy, a mobilization cantonment capable of housing 35,000 soldiers of the U.S. Army, was constructed near Sparta, Wisconsin. Although the other camps and cantonments were built during the early 1940's, none was larger than Camp McCoy. Today, the Wisconsin post, now known as Fort McCoy, claims an additional distinction as one of the largest surviving collections of World War II mobilization buildings and structures. An inquiry into the history of the planning and construction of Fort McCoy offers considerable insights into the mobilization effort mounted by the Army between 1940 and 1943 and the physical characteristics of the planned communities and architecture that resulted.

Camp McCoy began its existence in 1909 as a small, seasonal training ground located four miles to the southwest of the present McCoy cantonment. Until 1917, regular Army artillery batteries conducted occasional exercises on the grounds of a 14,000-acre military reservation created from the former McCoy ranch and adjacent tracts, some three and a half miles northeast of the town of Sparta, Wisconsin.[1]

With the entrance of the United States in World War I in 1917, the War Department, the Cabinet agency that oversaw the operations of the U. S. Army, decided to build a training camp for draftees in the upper Midwest region at the McCoy reservation, then known as "Camp Robinson." A gridiron plan was quickly laid out consisting of approximately seven blocks, and barracks, mess halls, warehouses, and stables were erected in parallel rows within the blocks. The buildings were constructed from standard mobilization plans prepared by the Construction Division of the War Department and were simple wooden structures, unfinished and hurriedly assembled, intended for temporary use and removal following the war. During the brief period between the completion of the temporary buildings and the Armistice ending hostilities, field artillery and infantry units occupied the camp and were trained.[2]

Following the conclusion of World War I, the barracks and mess halls were dismantled at Camp Robinson, and the reservation began a twenty-year period as a summer training post for regular Army artillery units, Army reserve troops, and National Guard detachments from the western Great Lakes area. During the 1930s, the reservation, now known as Camp McCoy, also became a district headquarters for the Civilian Conservation Corps (CCC), an unemployment relief agency of the New Deal. A few permanent buildings for administering the summer training activities were erected around the perimeters of the World War I cantonment site, which served as a field for the tent camps pitched annually by the visiting troops.[3]

In 1939, as events in Europe moved again toward war, the War Department secured the transfer of 9,500 acres owned by the Department of Agriculture to the Camp McCoy reservation. The following year, the Army General Staff decided that the Second Army, composed of 65,000 men, should conduct maneuvers, or "war-games," at McCoy. The open, varied terrain of the camp proper and of the surrounding countryside appealed to the commanding officers in the Second Army and other observers as especially well-suited for training exercises involving large numbers of troops.[4]

The maneuvers were conducted successfully in August 1940, and apparently contributed to the selection of Camp McCoy as a possible site for a new mobilization cantonment. In spring 1941, Major Everett C. Hayden, Zone Constructing Quartermaster for the Sixth Army Corps area, sent Lieutenant

Daniel C. Lamoreaux with a real estate appraiser to Wisconsin for an informal survey of the privately-owned land north and northeast of the Camp McCoy reservation. Lamoreaux and the appraiser reported favorably on the suitability of the adjacent area for a large training cantonment, and Hayden recommended to the Commander of the Sixth Corps that McCoy be considered for expansion.[5]

The Planning of Camp McCoy, 1941

The investigation of the Wisconsin site was part of a national effort in "advance planning" ordered by Brigadier General Brehon B. Somervell, Chief of the Construction Division in the Army Quartermaster Corps. Following the passage of the Selective Service Act in October 1940, the War Department had been faced with the immediate planning and construction of camps and cantonments[6] throughout the United States in less than four months. Sites had to be appraised and acquired; architect-engineering firms had to be retained and prepare detailed surveys and plans for layout and road and utility construction; general contractors had to be hired; and construction of the camps and cantonments had to be accomplished. While in civilian projects these activities would be carried out successively, the need to house almost immediately draftees and National Guardsmen forced the Construction Division to conduct them simultaneously. The results were delays, confusion, and large increases in cost.[7]

Somervell, who assumed the construction post at the end of 1940, resolved to avoid the embarrassment of delay and excess cost with the erection of the camps and cantonments that would be required for the next wave of draftees. He sent instructions to the Zone Constructing Quartermasters, such as Hayden, to look for suitable sites, and recruited a first-rate professional staff in Washington to coordinate real estate acquisition, site planning, architectural and engineering design, and construction management.[8]

To direct the efforts of the zone constructing quartermasters to acquire property, Somervell hired John J. O'Brien, a top real estate attorney at the Department of Justice. As chief of design in the Engineering Branch, the general appointed Major Hugh J. Casey, a brilliant structural engineer that he borrowed from the Corps of Engineers. To head the Architectural Unit within the Design Section, the Construction Division chief hired George E. Bergstrom, president of the American Institute of Architects. As Chief of the Civil Engineering Unit, Frederick H. Fowler, president of the American Society of Civil Engineers, was retained. To lead the site planning effort at the Construction Division, Somervell and Casey recruited Leon H. Zach, a former associate of the Olmsted Brothers, one of the most prominent landscape architecture firms in the nation. These newcomers were to play influential roles in the construction campaign that lay ahead.[9]

Late in May 1941, recommendations for camp and cantonment sites began to arrive at the Construction Division from the commanders of the nine Army Corps areas. Casey and the specialists in the Design Unit reviewed each proposal and commented on each with respect to any difficulties in construction or aspects likely to escalate costs. After the Army General Staff reviewed the evaluations of the Construction Division and the field commanders, the chief of staff, General George C. Marshall, made the final recommendation of sites to Secretary of War Henry L. Stimson. In May, the secretary approved nine locations, and in July, he approved fourteen, including Camp McCoy, for preparation of detailed surveys, site plans, and construction drawings. Only "advanced planning" for the twenty-three sites was to be undertaken; no funds for construction had been sought yet from Congress. General Somervell merely wished to be ready with approved sites and building plans when the next call for mobilization camps came.[10]

Figure 55 *Historic view of barracks (800 Series) at Camp McCoy.*

Figure 56 *Historic view of barrack (700 Series) with aqua medias at Camp McCoy.*

In addition to the military and construction advantages found by the Army at Camp McCoy, the heavy lobbying of Wisconsin congressmen, senators, and state officials on behalf of the McCoy site undoubtedly influenced the War Department to consider the location favorably. In early 1941, Governor Julius P. Heil instructed the adjutant general of Wisconsin, Brig. Gen. Ralph P. Immell, to make the the Army aware of the advantages afforded by the western Wisconsin camp for training troops. Simultaneously, Congressman William H. Stevenson of LaCrosse, in whose district McCoy was situated, began to lobby for selection of the camp for expansion by the War Department. The two U.S. senators from Wisconsin, Alexander Wiley and Robert M. LaFollette, Jr., added their influence in Washington. Although Somervell was committed to building only in locations favorable to military training and expeditious construction, he did not object to choosing a site that also enjoyed political support. Hence, lobbying by state officials and legislators also helped assure the designation of Camp McCoy as an advance planning project.[11]

When Secretary Stimson approved the second group of locations in July, Somervell was ready with a list of architect-engineering firms that Casey's staff had endorsed for carrying out the "advanced planning." Although several companies had supervised the construction of camps or cantonments in 1940-41, some had experience in civilian projects only. In Wisconsin, the Construction Division sought the services of Mead, Ward and Hunt, a Madison firm falling in the second category. During the last week of July, Clayton N. Ward, a senior partner of the company, signed a "cost plus a fixed-fee"[12] contract with the War Department for $100,000 and the following week began to hire the first of some 125

engineers that eventually would work on the advanced planning for a McCoy cantonment.[13]

At the beginning of August, Ward opened a branch office at Camp McCoy. Topographical surveys, the first task in planning a camp, were started immediately. At the same time, Lieutenant Colonel Hayden, the zone constructing quartermaster, sent two officers from his staff to the camp to establish a local constructing quartermaster office for overseeing the work of Mead, Ward and Hunt. An officer from the real estate branch of the zone office arrived to begin appraisals on the private land needed for expanding the McCoy reservation. The proposed project would be immense. News releases at the end of July estimated that the old McCoy reservation would be expanded to approximately 55,000 acres and that a cantonment large enough to house 30,000 men would be built. The total cost of construction was placed at $22,800,000.[14]

By the end of August, Ward's surveyors completed the topographical field work, and draftsmen at the camp prepared maps for use in other surveys. During the same time, the Mead, Ward and Hunt staff investigated alternate sites within the proposed reservation area for the cantonment proper--containing the barracks, mess halls, administration buildings, service facilities, and social buildings of a training camp. Starting with five locations, the engineers and constructing quartermaster staff narrowed the choice to two possibilities: a) a relatively level tract between County Trunk Road "B" (now State Highway 21) and the LaCrosse River; or b) a more compact area between Tarr Creek, a small stream flowing roughly east-west, to the north of Trunk Road "B," and the Northwestern Railroad tracks, located south of the road. The engineers also devised tentative layout plans for a cantonment at either location.[15]

As the two layouts took shape in late August and early September, other members of the Mead, Ward and Hunt force began to prepare surveys for the six types of utilities and transportation features that would be constructed in the cantonment: a) rail spurs from the Northwestern Railroad, b) sources of water supply, c) a water distribution system, d) sewage disposal plant, e) roadways, and f) an electrical supply system. As each of the field investigations concluded, draftsmen in the engineering camp office began to prepare drawings depicting tentative designs for each system.[16]

As September passed, company designers prepared general plans for the cantonment in both of the alternate locations. On September 27, a representative of Mead, Ward and Hunt and Lieutenant Robert K. Sawyer, the Camp McCoy constructing quartermaster, presented Site Plan "A," the layout design north of Trunk Road "B," and Site Plan "B," the layout south of Tarr Creek, to Army representatives in Chicago. At the meeting, Major General Joseph M. Cummins, commanding general of the Sixth Army Corps area, which included Wisconsin, approved the selection of Plan "A" for construction of the cantonment.[17] The general's decision followed a field investigation of the two plans and sites the day before by officials of the Quartermaster Corps. The reasons given by Sawyer in a press release for selection of the northern location and layout included the greater room for future expansion available north of Road "B" and better possibility of adequate drainage. In addition, the more spacious bounds of the north site would allow a layout that provided a more pleasing architectural effect.[18]

The plan selected on September 27 was based on the principles set forth in the typical layout plans prepared by Leon Zach and the Site Planning Unit of the Construction Division. Mead, Ward and Hunt used the Zach layout as the basis for designing cantonment housing for the triangular infantry division, the type of army unit likely to occupy most of the advanced planning sites. The sample design issued by the War Department in summer 1941 was guided foremost by the training requirements of a triangular army division, the core of which was three infantry regiments.[19] In the diagram, one side of the central parade ground was occupied by six blocks pertaining to the three regiments, which could march to their training areas on the opposite side of the parade field without encountering traffic resulting from the movement of non-infantry troops. The artillery batteries of the division and detachments of special troops were arranged

on the other two sides of the parade, allowing them to engage in their training activities without interfering with those of the infantry.[20]

Zach's typical blocks within the general layout were based both on military organizational requirements and city planning principles. Each block was to be occupied by a battalion of troops. Two blocks comprised a regiment. Within a block were six to seven companies, depending on the type of battalion involved. Along each street in a block were four mess halls at center, and ten or more barracks, with a company usually occupying three barracks and eating in one of the mess halls. To the rear of the barracks, at either end of each street were company administration buildings, one for each company. Zach arrived at the typical block designs after consulting with division officers in the field.[21]

The site planning chief also invoked city planning precepts in the model layout. Service, social, and cultural buildings--such as infirmaries, service clubs, theaters, and chapels were located within easy reach of each residential block. Incompatible mixtures of land use were avoided. Thus, the warehouse and maintenance structures were concentrated in a single block, away from the troop housing areas, and the hospital block, which was not shown on the typical plan, was isolated from the cantonment area to reduce the effect of noise and dirt on patients. Traffic circulation for motorized vehicles was carefully considered, with two parallel, main arteries flanking the ends of all troop blocks to avoid congestion. The compactness of the overall configuration reduced travel time. Acknowledging the importance of motorized transport in contemporary warfare, Zach also provided generously for parking areas along the outside of each block. Fire prevention was fostered by placing 250-foot firebreaks between each block in the cantonment. Finally, as in any civilian community with a population of 30,000, Zach provided ample open space for recreation and designated the central parade ground for such use.[22]

In devising Site Plan "A" for the new Camp McCoy cantonment, Mead, Ward and Hunt adopted the block and regimental arrangements in the typical layout and observed the city planning principles implied in the model design. The general plan devised by the Madison firm, however, went considerably beyond the Zach layout in offering both an efficient arrangement of blocks and an aesthetically pleasing overall configuration.

In the design approved by General Cummins, the architect-engineers arranged three curvilinear segments, each containing from five to nine battalion blocks, in a triangular pattern. The three infantry regiments of the triangular division would occupy the northern segment, which was situated close to the infantry training areas in the proposed reservation. The eastern half of the southern segment was intended for the artillery of the division and battalions of special troops attached to the division. The artillery batteries, at the end of the southern segment, were located a short distance north of the firing ranges constructed earlier for artillery practice at the original Camp McCoy. Thus, the two principal groups of troops in a triangular division, the infantry and artillery, could travel quickly and unimpeded to their training areas.

Along the western half of the southern segment and along the entirety of the northwestern segment, the general plan called for occupancy by "non-divisional" troops, which would consist principally of detachments from the various service corps in the Army. The Ordnance Department, Signal Corps, Quartermaster Corps, Medical Corps, tank destroyer detachments, and other non-divisional units would be trained at locations situated away from the division blocks.[23] Within the triangle formed by the segments was to be built the headquarters of the infantry division, located roughly the same distance from all three segments, for ease of communication.

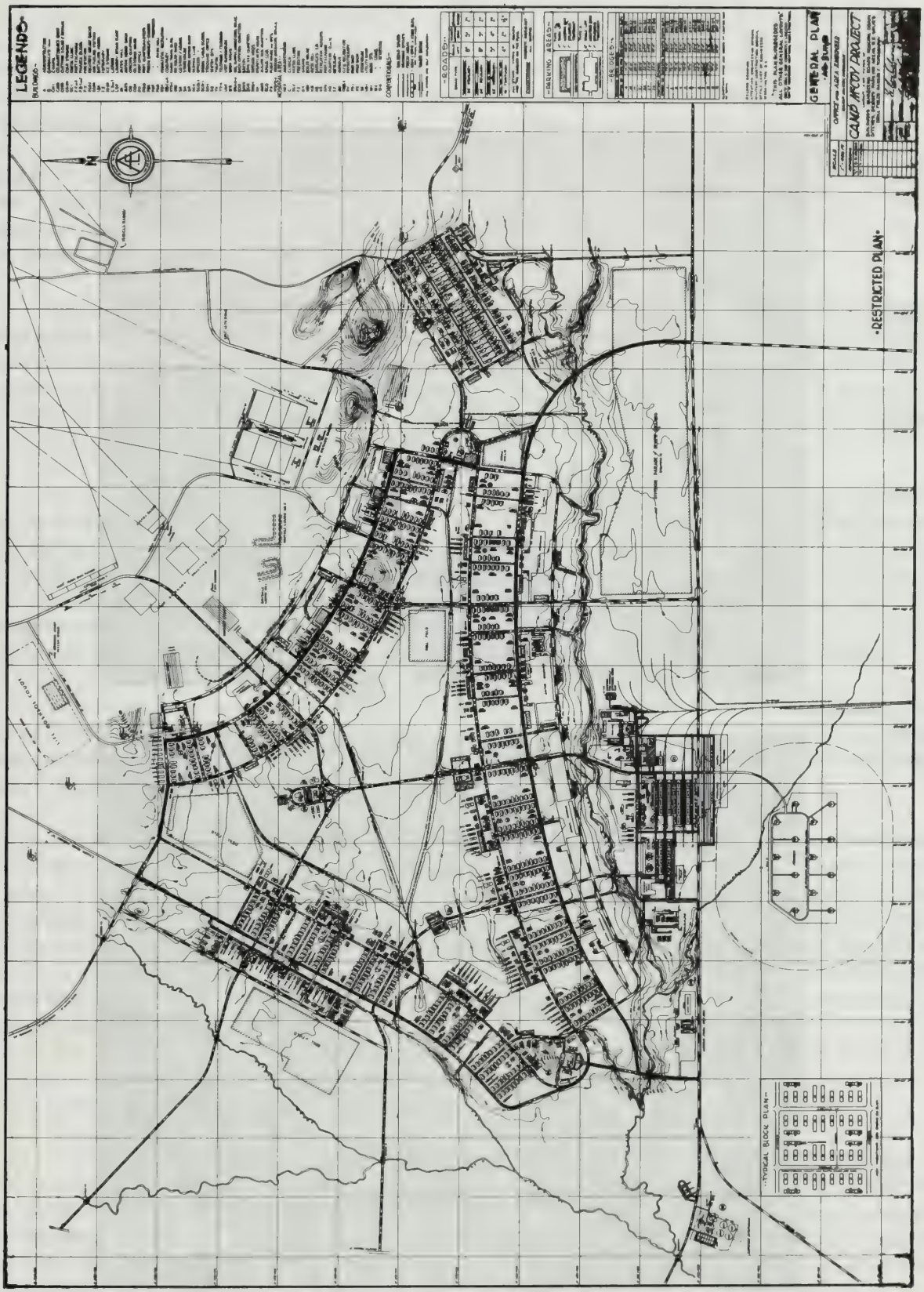

Figure 57 General plan as built of Camp McCoy.

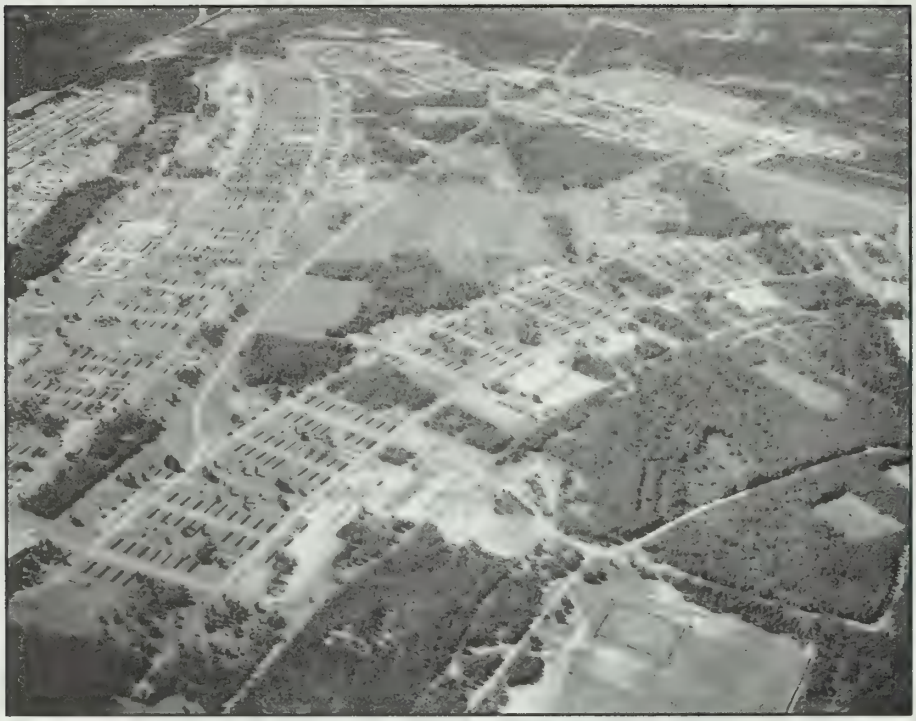

Figure 58. Aerial photographic of triangular layout, 1988.

Figure 59. Aerial view of block, 1988.

Mead, Ward and Hunt discarded the gridiron pattern of the typical design and substituted curving lines in all of the north and south segments and in the southern half of the northwest section. The avenues connecting the battalion blocks in troop housing areas would afford constantly changing perspectives as motorists or pedestrians traveled through the cantonment, counteracting the institutional character of the identical buildings and avoiding the monotony of large numbers of rectilinear blocks present in gridiron plans. The inspiration for the curvilinear design derived from the informal tradition in American city planning, which had begun in the late-19th century with the varied street patterns of suburbs laid out by pioneer landscape architect Frederick Law Olmsted and reached a peak of popularity with model communities planned after World War I, such as Radburn, New Jersey (1929) and the so-called "green belt" towns built by the federal government (1935-37).[24]

Mead, Ward and Hunt also worked more formal aesthetic elements into the Camp McCoy plan. The principle of siting monumental buildings at the end of axial streets, widely used in American cities in the early-20th century as part of the "City Beautiful" movement, found expression in Plan "A" with the location of the division headquarters building at the terminus of the main north-south avenue approaching the center of the triangle from the south. At other locations, the architect-engineers placed regimental chapels at the end of battalion streets, providing a pleasing effect with the silhouetted spire.[25]

Mead, Ward and Hunt placed the service areas of the cantonment outside the triangular housing area, as the Site Planning Unit had recommended. The hospital block, a gridiron section containing over 100 buildings, was located about 1,000' east of the juncture of the northeastern and southern segments of the triangle. The warehouse district and post headquarters were placed in a rectangular block between the south segment and Trunk Road "B." Detention barracks were located to the west of the warehouses. The sewage treatment plant and three incinerators were erected away from the inhabited sections of the camp, about a mile southwest of the juncture between the northwest and southern segments of the triangle.

With the acceptance by the War Department of the triangular plan at the northern site, Mead, Ward and Hunt were able to complete detailed plans for laying out the cantonment and constructing the necessary roads, railroad spurs, and utilities. By the middle of October, the firm had completed some fifty-eight tracings in addition to the advanced planning phase of the Camp McCoy project.[26]

Meanwhile, the impetus to begin construction of the Wisconsin cantonment and the other twenty-two "advanced planning" projects diminished. A national emergency requiring immediate construction had not arisen in Europe or the Far East, and army chief of staff General Marshall did not wish to request an appropriation from Congress for new cantonments before they were justified. As a consequence, despite the hopefulness of local citizens in towns near Camp McCoy, the Construction Division directed the suspension of activity at the proposed reservation after the architect-engineers finished their work. The constructing quartermaster office at "old" Camp McCoy was closed, and the original post resumed its previous existence as an artillery training ground.[27]

The Construction of Camp McCoy, 1942

Early December 1941, the Japanese attacked the U.S. naval base at Pearl Harbor, Hawaii, and the nation entered World War II. The national emergency justified the mobilization of an additional 500,000 men and the construction of the advanced planned cantonments. Early January 1942, General Somervell, who had been promoted in December to assistant chief of staff for construction (G-4), secured approval from General Marshall for the construction of six cantonments, including the expansion of Camp McCoy. By the end of January, fifteen such projects had been approved or were under construction.[28]

The 1942 cantonments were to be built by the Corps of Engineers, which had assumed responsibility for all army construction in December. Unlike the camps and cantonments of the 1940-41 construction "campaign," in which a single, large contractor undertook a complete project under a "cost plus a fixed fee" arrangement, the 1942 plans would be advertised for bids and awarded to multiple contractors, under a "fixed price" contract. Such an arrangement would control costs, which had greatly exceeded the original estimates in 1940-41, and permit smaller, regional contractors who lacked sufficient financial backing to undertake a single, $22 million project, to participate in the immense, multi-billion dollar emergency construction program ahead.[29]

In Chicago, Lieutenant Colonel Hayden, now assistant division engineer for construction in the Great Lakes Region of the Corps, ordered specifications to be prepared for the Camp McCoy project. The principal volume of specifications, "General Housing, Hospital Boiler House and Steam Distribution," was compiled in late January and early February.[30] On February 14th, Hayden started taking bids in Chicago for the principal contracts. By February 25th, additional specifications had been prepared and released to prospective bidders covering construction of the sanitary and storm sewerage system, sewage treatment plant, water supply and distribution system, roads, drainage, parking areas, motor fuel storage and distribution, pump houses and water storage reservoirs, and electric distribution system, and all aspects of the hospital block.[31]

News of the revived McCoy cantonment arrived in Sparta, Wisconsin, via a telegram from LaCrosse congressman William H. Stevenson on February 5, 1942. Four days later, February 9th, the U.S. District Attorney in Madison, Wisconsin, filed a motion in federal court to condemn the 9600-acre site of the cantonment proper. Shortly after the motion was filed, real estate appraisers and negotiators from the Corps of Engineers arrived to begin negotiation with the owners of the private tracts comprising the cantonment site and larger reservation.[32]

About the middle of February, Colonel Hayden sent Lieutenant Daniel Lamoreaux to the cantonment site to establish a field engineering office for directing the construction work. The War Department took possession of the site on March 10th, so that construction could begin as soon as possible. Bids were opened and awarded between March 20th and April 2nd for most of the contracts. Nine contracts were let for the utilities, roadways, and railroad spurs. The immense work of constructing the 1,487 buildings of the cantonment was split into seven contracts, each pertaining to a different construction area.[33] All of the contractors came from the northern Midwest area. The principal contracts went to concerns in St. Paul or Minneapolis, Minnesota, the largest nearby cities.

Early in April, Lieutenant Colonel Hayden became area engineer of the McCoy project and thus assumed full responsibility for overseeing construction of the cantonment. Hayden was selected by the Corps of Engineers for the Wisconsin assignment because of his success in 1940 securing the quick and economical completion Fort Custer, a Michigan mobilization cantonment, one of the largest of the 1940-41 construction campaign. As area engineer, Hayden checked on the work of the contractors, overcame difficulties in supplies or logistics, and supplied standard War Department building drawings to the construction firms. He also supervised the preparation by his own staff of new tracings based on the plans of Mead, Ward and Hunt, providing guidance to the contractors on the general layout, drainage, utilities, and roadways.[34]

The building drawings used by the contractors were nearly all part of the 800 Series of standard War Department plans, prepared the previous spring and summer by George Bergstrom and the Architectural Unit of the Construction Division for use in the advanced planning cantonments. Despite impending shortages in many construction materials, General Somervell persuaded Secretary of War Stimson and General Marshall in January 1942 to allow the Corps of Engineers to proceed with the 800

Series plans, which featured well-constructed wood buildings with ample structural members and such comforts as indoor plumbing and forced, hot-air furnaces.[35]

During the previous peacetime construction campaign in 1940-41, the Construction Division of the Quartermaster Corps had used the 700 Series of standard drawings, which had provided uniform designs for nearly 300 distinct building types needed for the smooth operation of a mobilization cantonment. In the 800 Series, Bergstrom made slight structural improvements, removed superfluous features, and enlarged several basic building types, such as the troop barracks. Otherwise, he retained most of the features of the 1940-41 buildings. At Camp McCoy, Hayden distributed to the construction area contractors 800 Series plans for nearly all the building types to be erected. Where plans in the newer series were not available, 700 Series drawings were employed.[36]

Approximately 100 types of buildings were erected at Camp McCoy, most of which were devoted to housing, eating, storage and administration and recreation.[37] There were 469 barracks erected; forty-two bachelor officer quarters; 172 company mess halls; and 184 combined company storehouse, administration, and recreation buildings.[38] Structures in the troop housing blocks of the triangle were designed for use by certain kinds of army units. For example, a barracks was intended to house a platoon, and a mess hall or a storehouse-administration-recreation building for the use of a company. At the end of each battalion block were two battalion administration buildings and a row of bachelor officer quarters. At the edge of each regimental area was a cluster of regimental buildings: a post exchange, chapel, administration building, infirmary, and regimental commanders' quarters.

In the areas around the periphery of the triangular section were constructed building types associated with personal services and post maintenance. Block 10, the hospital section, contained several kinds of wards, clinics, and nurses' quarters. Block 21, the warehouse area, included rows of storehouses along rail sidings, a large laundry for cleaning the clothing of the cantonment residents, a bakery, cold food storage, and post headquarters buildings. Along the outer edges of the three segments in the triangle were motor pool and maintenance buildings and fire stations. At periodic junctures between regimental and detachment groupings were service (social) clubs and movie theatres.

The structural systems used in Camp McCoy buildings were either of balloon or platform construction, entirely composed of wood members. Wall sheathing and flooring were of softwood. The interiors were not finished with plaster or paint. Instead, "tempered pressed wood," fiber "insulation board," and gypsum board were used to cover walls and ceilings. The exteriors in the troop housing sections were of uniform appearance: grayish white, asbestos cement siding on the walls, yellow wood trim, gray wooden foundation "skirting," and red asphalt shingle roofs. In the warehouse section, wooden, "shiplap" siding was employed and painted yellow. The temporary nature of a mobilization cantonment was emphasized by the use of concrete piers, rather than excavated basement walls, for foundations.[39]

After the last of the contracts was let in April, the War Department curtailed the release of information to the public regarding construction activities.[40] As a consequence, few specifics are known about the efforts mounted during the next four months. Local lore relates that the demand for speedy completion caused Area Engineer Hayden and the contractors to employ some 20,000 construction workers to complete the project on time.[41]

In late August, Colonel George MacMullin, post commander of the new camp, hosted an open house for the public of the nearly completed cantonment. During the next month and a half, units from the old camp gradually occupied sections of the new area, while the contractors finished their work. The

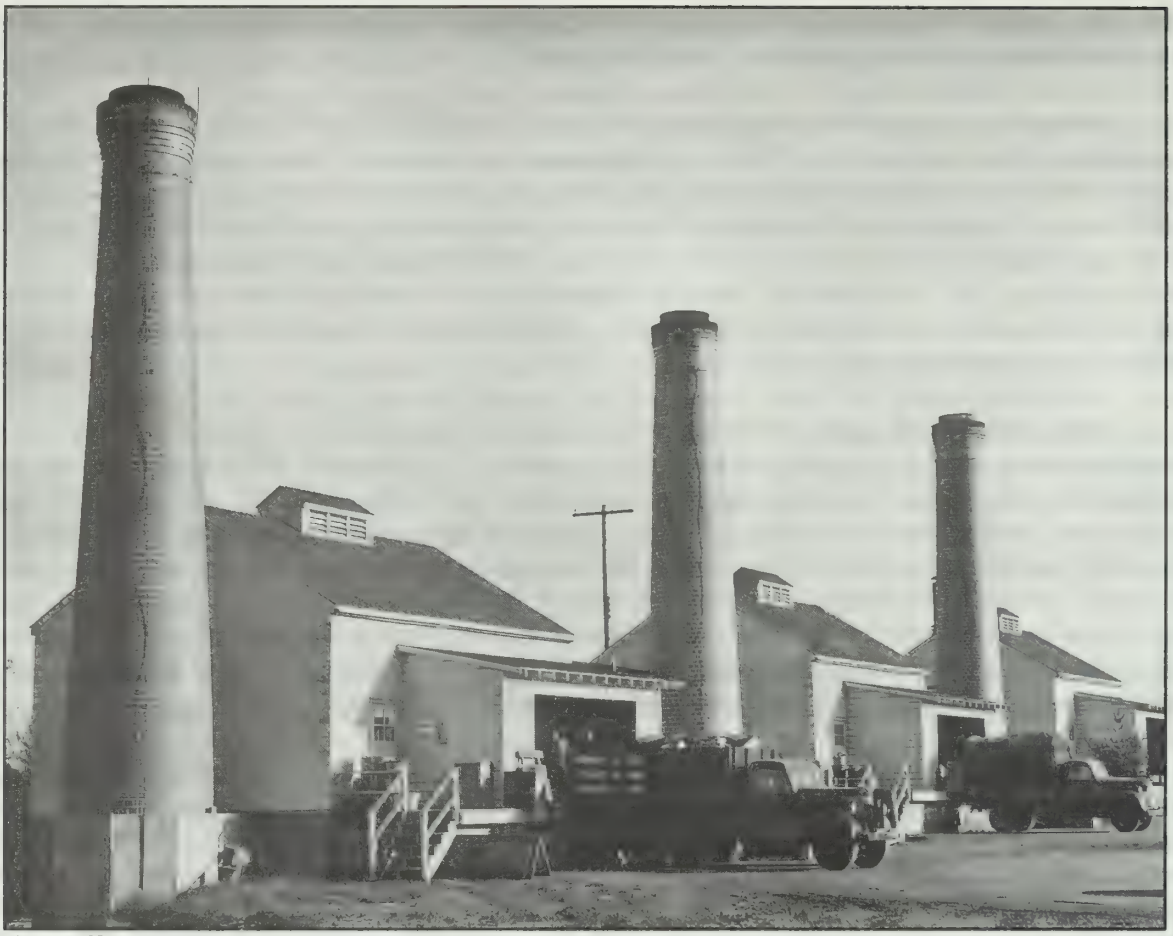

Figure 60 Historic view: unloading supplies at Camp McCoy.

finished capacity of the cantonment was 36,836 officers and enlisted men; the total cost at the end of 1942 was $32,383,000. In October, 1942, the 100th Infantry Regiment from Hawaii became the first full Army detachment to occupy the McCoy cantonment.[42]

Conclusion

In October 1942, the Second Infantry Division of the Army arrived for training at the cantonment and remained for a year, leaving for action in the Italian campaign. The 76th Division then took over the cantonment for a year, departing for service in the liberation of Western Europe in December 1944. Also in 1944, Camp McCoy became a personnel center for the Army, receiving and redirecting soldiers for new assignments. As the war closed, the personnel center assumed the role of discharging veterans. The personnel center closed in May 1946, and most other functions at the camp halted a year later.[43]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of regular, reserve, and National Guard units in the Fifth Army area for service in the Korean War. A reassignment and separation center was also opened at the camp during the conflict. Since 1953, the camp has become a center for training reserve units of the Army and National Guard regiments of the Midwest region.[44]

The cantonment section of Fort McCoy today vividly recalls both the planning and construction phases of its beginnings. The triangular plan remains intact, continuing to provide pleasant perspectives along curvilinear avenues and occasional vistas of impressive buildings at the end of axial streets. Only a few hundred of the 1,500 wartime structures have been removed, and the exterior colors and materials on most buildings are unchanged from the 1940s. Nearly all of the mobilization building types remain intact. Thus, Fort McCoy represents one of the most complete collections of 800 Series standard buildings still in existence.

NOTES:

1. Post Engineer Office, "Historical Data Camp McCoy, Wisconsin" (Camp McCoy, January 15, 1946), 5 typescript copy of original report [in box marked "Historical Engineering Records, "Meatlocker" storage room, Building 2145, Fort McCoy]; Martha Sorenson, "Post Becomes a Reality in 1909," *Triad* (Fort McCoy), Vol. 3, No. 11 (May 29, 1986), pp. 2-3.

2. See the postcard photographs depicting the barracks, mess halls, and stables at Camp Robinson, in the collection of the Monroe County Local History Room, Sparta, Wisconsin; Post Engineer Office, ibid.; Sorenson, ibid; and Lenore Fine and Jesse A. Remington, The Corps of Engineers: Construction in the United States, a volume in the series, United States Army in World War II: The Technical Services (Washington, D. C.: Office of the Chief of Military History, United States Army, 1972), pp. 7-25.

3. Post Engineer Office, p. 11; historical photographs of Camp McCoy during the 1920's in the archive of the Public Affairs Office, Fort McCoy; Post Utilities Office, Camp McCoy, Wisconsin, "Water Supply and Sewage System, Old Camp McCoy & Prisoner of War Area," Plan No. 50-64, dated September 12, 1942, revised to June 26, 1945 (linen drawing in map file, entry hall, Building 2111, Fort McCoy).

4. "22 Million Dollar Improvement for McCoy," Monroe County Democrat, July 31, 1941, p. 6; "Files Tell Events Leading to McCoy Expansion," Democrat, July 31, 1941, p. 1; "Maj. Gen. J. M. Cummins Sees McCoy Possibilities," Monroe County Democrat, August 7, 1941, p. 1.

5. "Officer Who Helped Build McCoy in '42 Recalls Post's Early Construction Days" [undated, c. 1950's newspaper clipping, probably either from the *Real McCoy* (Camp McCoy newspaper) or a Sparta newspaper, found in the archives of the Public Affairs Office, Fort McCoy]; Fine and Remington, pp. 344-46.

6. In the mobilization period before World War II, "camps" referred to posts in which the troops lived in tents, and "cantonments" to posts in which the housing was of wooden construction.

7. Fine and Remington, pp. 198-308 (See the discussion of the planning and construction of the the 1940-41 camps and cantonments in).

8. Ibid., pp. 344-54.

9. "Construction Division Expansion," *Civil Engineering*, Vol. 11, No. 3 (March, 1941), p. 180; Fine and Remington, pp. 333, 347, 401-7.

10. Fine and Remington, pp. 353-54.

11. "22 Million Dollar Improvement for McCoy," *Monroe County Democrat*, July 31, 1941, p. 6; "Success at Last," *Sparta Herald*, August 4, 1941, p. 1; Fine and Remington, pp. 377-78.

12. The cost plus a fixed fee contract had been developed by the War Department for emergency construction projects in which the conventional advertisement for bids method was too time-consuming. Under a fixed fee contract, the firm involved agreed to carry out a project for a set fee, and the government paid all expenses.

13. "22 Million Dollar Improvement for McCoy; Completion Set for March After Construction Opens," *Monroe County Democrat*, July 31, 1941, p. 1.

14. "Construction Qm. Office at McCoy," *Monroe County Democrat*, July 31, 1941, p. 1; "McCoy Land Appraisal Opens; Begin Activity," *Sparta Herald*, August 11, 1941, p. 1; " 22 MillionDollar Improvement for McCoy; "McCoy Survey Project on Schedule; Power Surveyed," *Monroe County Democrat*, August 21, 1941, p. 1.

15. "McCoy Survey Project on Schedule; Power Surveyed"; "Triangular McCoy Site Plan Approved by 6th Corps Area," *Sparta Herald*, September 29, 1941, p. 1.

16. "McCoy Survey Project on Schedule; Power Surveyed"; "Complete One M'Coy Survey," *Monroe County Democrat*, September 4, 1941, p. 1.

17. Among the Army officials present at the meeting and advising the general on his decision were Zone Constructing Quartermaster Hayden; Major G. R. Tyler, representing the Site Planning Unit of the Construction Division in Washington; and supply and medical officers on General Cummins's staff.

18. "Triangular McCoy Site Plan Approved by 6th Corps Area."

19. Figure A shows Plan No. 614-179, a "typical layout-diagram" prepared by Zach's staff soon after approval of the Mead, Ward and Hunt McCoy plan.

20. Also see the discussion of military training requirements in a triangular division plan found in Part III--"Army Ground Forces Stations," Chapter III--"Site Planning," *Engineering Manual*, Office of the Chief of Engineers (Washington, D. C.: War Department, April, 1943), sections 3-20 to 3-21.

21. See Typical Plan 614-179; Fine and Remington, pp. 351-53.

22. See Figure A; "Selection of Sites for Structures and Facilities for Economy," Section 3.03 in "Part I--"Selection of Sites," *Engineering Manual* (February, 1943); "Part III--Army Ground Forces Stations," Sections 3-20 through 3-23, *Engineering Manual*.

23. See the description of non-divisional troops in "Part III--Army Ground Forces Stations," Section 3-22 (e).

24. Mel Scott, *American City Planning Since 1890* (Berkeley: University of California Press, 1969), pp. 12-13; 259-61; 339-40.

25. Ibid., pp. 47-65.

26. "Index, Drawings from Area Engineer, Camp McCoy," February 19, 1944 (in box marked "Historical Engineering Records," "Meatlocker" storage room, Building 2145, Fort McCoy).

27. Fine and Remington, pp. 413-17; "Prospects for McCoy Post Looking Bad," *Sparta Herald*, October 6, 1941, p. 1, c. 1; "184th Field Artillery Unit Arrives at Camp McCoy," *Sparta Herald*, October 13, 1941, p. 1.

28. Fine and Remington, pp. 479-82; "Camps Awarded and/or Underway [and] Advanced Planning -- Camps," January 22, 1942 (in National Archives, 107-23-894), quoted in Perry Busch and Diane Wasch, "?" (Washington, D. C.: Historic American Buildings Survey, 1988), p. 47. The other advanced planning cantonments constructed in 1942 besides McCoy included Camp Carson, Colorado; Camp Campbell, Kentucky; Camp Atterbury, Indiana; Camp Rucker, Alabama; Camp White, Medford, Oregon; Camp Pickett, Virginia; Camp Swift, Bastrop, Texas; Camp Butner, Durham, North Carolina; Camp Adair, Oregon, Camp Gordon, Georgia; and Camp Beale, California. Busch and Wasch, ibid; "Status of Construction for Divisions to be Activated in 1942," [memorandum written in the G-4 construction office, Army General Staff], February 25, 1942 (from "Numerical File, 1921 to March, 1942, Director S. S. and P, G-4," National Archives, 165-234-469).

29. Fine and Remington, pp. 472-78; 521; 569-71;

30. See "The 'Daddy' of Camp McCoy to New Fields," *The Real McCoy* [camp newspaper during World War II], October 16, 1942, p. 8, c. 1; "Bids on McCoy Work Started February 14," *Sparta Herald*, February 16, 1942, p. 1, c. 8; and U. S. Engineer Office, Chicago, Ill. Construction Division, Corps of Engineers, U. S. Army. Specification No. DE-11. "Camp McCoy. Sparta, Wisconsin. Volume 1--Specifications for Construction of General Housing, Hospital Boiler House and Steam Distribution and the Utilities Therein," Revised February 14, 1942 (original copy in box marked "1942 Specifications," "Meatlocker" storage room, Building 2145, Fort McCoy).

31. "Bids on McCoy Work Started February 14," *Sparta Herald*, February 16, 1942, p. 1, c. 8; "Work at McCoy Scheduled to Start About March 20," p. 1. c. 8.

32. "U. S. To Receive Bids for Camp McCoy Project," *Monroe County Democrat*, February 5, 1942, p. 1, c. 8; "Construction Is Authorized for Camp McCoy; Will Take Over 9600 Acres Land," *Monroe County Democrat*, February 12, 1942, p. 1, c. 8; "Work Started on McCoy Building," *Democrat*, February 19, 1942, p. 1, c. 8.

33. "Bids on McCoy Work Started February 14"; "Work Started on McCoy Building"; "Camp McCoy Cost Is Increased Seven Million," *Sparta Herald*, March 23, 1942, p. 1, c. 1; "More Wisconsin Concerns Get Contracts at McCoy," *Monroe County Democrat*, April 2, 1942, p. 1, c. 7; and Plan E, attached to this report.

34. "The 'Daddy' of Camp McCoy to New Fields"; "Index to Drawings from from Area Engineer." The drawings prepared by the Area Engineer's office were given numbers beginning with 6150.

35. Fine and Remington, pp. 350-51; 479; 482-83.

36. Busch and Wasch, pp. 12; 42-43; 46; Fine and Remington, pp. 350-51.

37. Some of the building types listed were built between the end of the initial construction campaign and the end of the war. Others were the results of remodeling during the war, such as the Personnel and Separation Centers.

38. Although 469 were erected, several were remodeled for use as part of the Personnel Center in 1945. See Post Engineer Office, "Historical Data, Camp McCoy, Wisconsin," p. 10.

39. For detailed analyses of the construction of buildings in the McCoy cantonments, see the Historic American Buildings Survey documentation reports on Buildings 1129, 801, and 635, prepared in September, 1988 as companion pieces for this report.

40. No articles can be found in either of the Sparta, Wisconsin newspapers regarding construction activities at the cantonment between April and August, 1942.

41. The 20,000 figure was also used by Clayton Ward of Mead, Ward and Hunt in August, 1941, as an estimate of the number of workers required to build the cantonment. See "Doubled Population Predicted for Sparta, Tomah, Districts," *Monroe County Democrat*, August 14, 1941, p. 1, c. 8.

42. "New Camp McCoy Open Sunday," *Monroe County Democrat*, August 27, 1942, p. 1, c. 8; "'All Right, You Guys, We're Moving'--On to New Site," *Real McCoy*, Vol. 1, No. 6, August 28, 1942, sec. 1, p. 1; Sgt. Lew Elkin, "Post Headquarters in New Camp Now," *Real McCoy*, vol. 1, No. 10, September 25, 1942, p. 1, c. 1; "Picture Taking Now Permitted, But Cautiously," *Real McCoy*, October 9, 1942, p. 1; "List of Completed Jobs by Service Command," January 31, 1943 (from collection, "War Construction Program for Period January 31, 1943-April 30, 1943," National Archives?)

43. Post Engineer Office, "Historical Data," typescript copy of original report, pp. 6-7; handwritten notations on ditto original report, p. 18.

44. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office (?), Fort McCoy, n. d., c. 1985, p. 6; Lou Ann Mittelstaedt, "McCoy's History, 1947-Present," *Triad*, 3, No. 11 (May 29, 1986), p. 5.

HISTORIC AMERICAN BUILDINGS SURVEY

MITIGATION DOCUMENTATION

FORT MCCOY

Building T-100
(Post Administration)

Building T-635
(Mess Hall)

Building T-801
(Storehs, Admin & Recreation)

Building T-1046
(Standard Ward)

Building T-1129
(Barrack)

Building T-1146
(Chapel)

Building T-1463
(Maintenance Shop)

Building T-1551
(Theater)

Building T-1863
(Officers' Quarters)

Building T-2000
(Service Club)

Building T-2002
(Guest House)

BUILDING T-1129

BARRACK

Figure 61. General view of the east and north facades from the northeast.

Figure 62. First floor squad room looking west.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-1129 (BARRACK)
[Camp McCoy, Building T-1129 (Barrack)]
HABS No. WI-308-A

Location: On the west side of South S Street, south of South 11th Avenue, in the triangular plan of the main post, Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.

Present Owner: Department of the Army.

Present Use: Now used by the Morale Support Directorate at Fort McCoy as a warehouse for recreational and leisure equipment.

Significance: Building T-1129 is of considerable historical and architectural significance locally and regionally as an unaltered example of a 74-Man barrack in the 800 Series of standard construction designs used by the War Department for temporary buildings during World War II. Out of the 461 74-Man barracks erected at Camp McCoy in 1942, Building T-1129 has survived with the least changes.

It therefore provides an excellent illustration of the original design, construction, materials, and finishes used in such barracks. In addition, because some of the drawings used for the barracks were also used for other standard buildings, some features in T-1129 exemplify the 1942 appearance found initially in other building types at the post.

In historical terms, the unfinished interior of Building T-1129 provides a vivid sense of the life led by enlisted soldiers in the mobilization training camps of the U. S. Army during World War II.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Standard War Department drawings for the 800 Series 74-Man Barrack are dated July 30, 1941. Construction of Building T-1129 was begun in April 1942 and completed on August 24, 1942.[1]

2. Architect: George E. Bergstrom, Chief of the Architecture Unit, Construction Division, Quartermaster Corps, U. S. Army, supervised the revision of the 700 Series of standard drawings that produced the 800 Series of plans. Lt. Col. Hugh J. Casey, Chief of the Engineering Branch, authorized and approved the 800 Series 74-Man barrack design.[2]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring

of 1942.[3] The owner from 1942 to 1947 was the War Department. Since 1947, the U. S. Department of the Army, the successor to the War Department, has held title.

4. Builder, contractor, suppliers: Building T-1129 was part of construction area B, which was built by the St. Paul, Minnesota, firm of Madsen, Schumacher, Watson and Associates. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building T-1129, and the rest of the cantonment, at auctions held in the Upper Midwest region during the spring of 1942. Other materials used in construction--concrete, cement-asbestos siding, wallboard, furnace and ductwork, plumbing and electrical fixtures, etc.--were apparently provided by subcontractors from the Wisconsin area.[4]

5. Original plans and construction: Building T-1129 is nearly unaltered in all respects. Record copies of the twenty standard War Department drawings used to construct all 74-Man Barracks at Camp McCoy have been preserved by the Directorate of Engineering at Fort McCoy and are currently kept in map files in the "Meatlocker" storage room in Building 2145. None of the construction photographs taken by the Army Signal Corps of Camp McCoy barracks could be found at Fort McCoy. A few were reproduced in the Sparta newspapers in August 1942. The cost of construction for Building T-1129 was $16,698.[5]

6. Alterations and additions: On the exterior, the only obvious alterations have been the replacement of a rectangular patch of the cement-asbestos siding on the west elevation with white-colored cement-asbestos siding of similar size and texture. The same white cement-asbestos siding has been used for replacement on a few other places on the exterior, as well as some in a gray-striped color. Also, the original wooden framed and wire mesh screens have been removed from nearly all of the windows on the exterior.

   In the interior the only noticeable alterations since World War II involve the placement between the first-floor squad room and entry corridor of a partition composed of the same stud and wall board construction as found in the rest of the interior. In addition, a doorway has been sealed with wall board between the north and south non-commissioned officer rooms and some minor changes of partitions have occurred in the rest of the south non-commissioned room.

B. Historical Context

The construction of Building T-1129 was part of a massive, nation-wide mobilization program designed to build cantonments in which to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood frame buildings such as Building T-1129,

FORT McCOY, BUILDING T-1129 (BARRACK)
[Camp McCoy, Building T-1129 (Barrack)]
HABS NO. WI-308-A (page 3)

the 1939 housing capacity of 200,000 persons was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely pioneered in the construction of these mobilization structures.

Building T-1129 was one of 461 74-Man barracks erected at "New" Camp McCoy, which in turn was one of several dozen mobilization cantonments built in the United States by the War Department between late 1941 and the beginning of 1943. The 1941-43 cantonments were constructed to house and serve as bases for training men drafted for Army service in World War II.

Two newly organized Army divisions occupied Camp McCoy during their training. The Second Army Division arrived at the cantonment soon after completion of construction, in the fall of 1942, and remained for a year, until November 1943, leaving for action in the Italian campaign. The 76th Division then took over the camp for a year, departing for service in the liberation of Western Europe in December 1944. In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year, the personnel center assumed the role of discharging veterans as the war came to a close. The personnel center closed in May 1946, and most other functions at the camp halted a year later.

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of regular, reserve, and National Guard units for service in the Korean War. Since 1953, the camp has become a center for training reserve units of the Army and National Guard regiments of the Midwest region.

When fully occupied by the Second and 76th Divisions during World War II, over 35,000 people lived in the cantonment. The camp was laid out in twenty-eight blocks, each of which housed two companies. Each company occupied a street in the block and was housed in seven to fourteen, 74-Man barracks, depending on the size of the company. Block 11, South S Street, on which Building T-1129 was erected, originally contained only two barracks, half of a company, and a Mess Hall. The east side of the street was an open field, as was the area to the south.

Each barrack in Camp McCoy during the Second World War housed a squad. In its nearly unaltered condition, Building T-1129 vividly illustrates the setting in which the basic organizational unit of the Army lived. The squad rooms on the first and second floor; the three non-commissioned officer rooms on the second level; and the wash, shower, and toilet rooms of the first floor all recall the World War II period with their unvarnished softwood floors, unfinished and unpainted ceilings and walls, original fixtures, and inexpensive construction materials.

FORT McCOY, BUILDING T-1129 (BARRACK)
[Camp McCoy, Building T-1129 (Barrack)]
HABS NO. WI-308-A (page 4)

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1129 is also a well-preserved illustration of the design, construction, and finished appearance of a 74-Man barrack built according to the 800 Series of standard War Department plans. At Camp McCoy there were minor variations from the standard plans, based on developing shortages of materials. For example, the 6" x 6" posts specified in the drawings at McCoy became three 2" x 6" boards, nailed together. With these minor deviations, the T-1129 barrack is an accurate representation of the 800 Series plans carried out.

Along with the other barracks in the McCoy cantonment, Building T-1129 illustrates the differences between the designs set forth in the earlier, 700 Series of standard plans and the 800 Series. All of the buildings in the company blocks are covered with cement-asbestos siding, an option in the 800 Series specifications, rather than with the shiplap wooden siding specified in the 700 Series.[6] In the 800 Series barracks, the "aqua medias," or pent roofs over the first-floor windows were omitted, as were large over-hanging eaves on the second floor. In addition, the 63-Man size followed in most 700-Series barracks was expanded by a one-bay extension in 800 Series buildings to a 74-Man size.[7]

At Camp McCoy itself, Building T-1129 has special architectural interest as the last remaining World War II barrack that has not been painted in the interior and in which the softwood floors remain exposed. As a result, the materials used and the construction techniques followed are easily discerned.

2. Condition of fabric: The general condition of Building T-1129 is good. Weathering on the exterior is most pronounced on the south side, followed by the east front and west rear. The north side has suffered relatively little weathering. The wooden features of the exterior show the greatest evidence of weathering: cracked and peeling paint, exposed and dried out surfaces, etc.

On a specific level, the wooden skirt around the foundation is heavily weathered on the south, with most of the gray paint worn away. The lower portions of a few skirt boards at the southwest and northwest corners are gone, and many boards are cracked. The concrete block foundation around the furnace room is in very good condition.

The cement-asbestos siding is in mostly good condition, with the replacements already noted on the west and in spots on the south and east. Paint is badly peeled on all windows on the south wall, and wooden jambs are weathered in places. The doors and doorways of the north wall are in excellent condition, with some minor peeling of paint noticeable on the east and west walls.

FORT McCOY, BUILDING T-1129 (BARRACK)
[Camp McCoy, Building T-1129 (Barrack)]
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Paint is peeling on the fascia and soffits of both the north and south walls and on the fascia of the east and west. Fifteen-foot long, unpainted boards have replaced the original fascia at the west ends of both the north and south walls. From casual observation, the asphalt shingles of the roof appear to be in good condition.

All the principal features of the interior appear to be in good condition. The softwood floors on both levels are worn, but no other obvious signs of heavy use or deterioration are evident.

B. Description of Exterior:

1. Over-all dimensions: Building T-1129 is oblong in shape and is 29'-6" wide (north-south) and 90'-0" long (east-west). The building is two stories and rises approximately 27' from grade to the ridge of the roof.

There are nine bays at the south side and eight, in the north. In both elevations, the bays are asymmetrically arranged: the western six bays corresponding to the squad rooms are spaced 10'-0" on center (from centerpoint to centerpoint of the windows), while the windows corresponding to the non-commissioned officer rooms, furnace room, or wash areas are grouped separately at the east end. At the south side, three non-commissioned windows on the second level are spaced 9'-0" on center, followed by a 14'-0" gap before the first squad room bay. At the north side, two windows on the second level, spaced 8'-0" on center, are followed by a 20'-0" foot gap. On the first-floor level the spacing is the same.[8]

The east and west sides contain a single bay on both stories at center. There is a shallow attic above the second story, and there is a crawl-space about 4' high beneath the first floor.

2. Foundations: The foundation of the 24'-6" x 11'-6" furnace room, at the northeast corner of Building T-1129, is constructed of concrete block, 8" thick and rising about 25" above grade. The remainder of the barracks rests on a system of poured concrete piers and footings. Beneath the western two-thirds of the first floor, there are four longitudinal rows of 1' square piers, spaced 10'-0" apart on center. The rows are spaced 9'-10" on center. The two exterior rows support the north and south sides, and two interior rows, the structural posts in the floors above. The piers are spaced more irregularly in the eastern third of the building because of the furnace room and center hallway. There are ten piers in the southern two rows and seven in the northern rows, west of the furnace room foundations. The piers rest in turn on concrete footings buried several feet below grade. The perimeter footings are 2'-0" x 2'-0" while the footings under the interior columns are 2'-3" x 2'-3". Both footing sizes were 1'-0" deep.

The crawl space below the barracks is screened by wooden skirts composed of 1" x 10" boards, averaging 16" to 17" in height and nailed vertically to the girders

above the piers and to 2" x 4" wooden sills set in the piers immediately above grade. Originally, the skirts were painted warm gray. There are three access openings in the skirts on both the south and north sides.[9]

3. Walls: The exterior walls are composed of three layers: a wooden panel foundation, nailed across the studs of the frame; a black felt vapor barrier; and cement-asbestos siding. The siding pieces measure approximately 24" x 11".

4. Structural system, framing: Building T-1129, and all 800 Series mobilization structures, are of light frame construction. The frame of the exterior walls rests on wooden girders built up of three 2" x 12"s borne by the foundation piers and is composed of 2" x 4" studs spaced 2'-0" on center. Diagonal 1" x 6" let-in braces running between the girders and second-floor girts and between the girts and plates occur every other bay on all elevations.

The interior structure is borne in the squad rooms of the first and second floors by wooden posts arranged in two parallel rows directly above the concrete piers of the foundation. In the first-floor squad room, the posts, which are each composed of three 2" x 6" boards nailed together, support the posts of the second floor. The joists of the second level are borne by double girders flanking the first-floor posts and supported by vertical boards nailed to the upper sides of the posts and by bracing boards running between the posts and girders. Additional knee braces run between the posts and joists.

On the second floor the posts are also composed of three 2" x 6" boards nailed together, but the bases of the posts are reinforced by four standard sized boards nailed to the post faces. The purpose of the scabs is to reinforce the splice in the posts. The upper edges of the scabs are beveled. Each of the two rows of second-floor posts supports a wooden girder composed of two 2" x 12" boards. Two vertical boards offer additional stability at the tops of the posts.

The joists run laterally and are spaced 2'-0" on center. The first- and second-floor joists are 2" x 8"s in the squad rooms and 2" x 10"s in the remainder of the building. The ceiling joists are 2" x 6"s, the rafters 2" x 8"s with a 2" x 10" ridge.

The east end of the barracks, containing the wash rooms, stairhall, and non-commissioned officer rooms, contains a separate structural system. The walls flanking the stairhall on both levels are load-bearing partitions and support the joists of the second floor and attic.

In the portion of the attic above the squad rooms, the two rows of posts continue up to support a girder composed of two 2" x 10"s. Tie boards, scabs and knee braces strengthen the joints. At the east end of the attic, above the non-commissioned officer rooms and stairhall, the load-bearing partitions continue up to support a plate of two 2" x 4"s under the rafters.[10]

FORT McCOY, BUILDING T-1129 (BARRACK)
[Camp McCoy, Building T-1129 (Barrack)]
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5. Porches, balconies: There are two poured concrete stoops attached to Building T-1129, and all other 74-Man barracks: one at the main, east entrance and a second at the rear exit. Note that Plan No. 800-443 calls for a wooden landing and steps. Each stoop consists of four steps rising to a two foot high platform. There are 1-1/4" iron pipe rails flanking both stoops. Part of the rail at the rear is missing.

   A wooden balcony is attached to the west wall, outside the exit door for the second-floor squad room. The balcony consists of a deck supported by two wooden brackets and a balustrade of board rails and posts. An opening on the north side of the rail allows exit, in case of fire, down a wooden ladder attached to the wall beside the balcony.

6. Chimney: There is a single chimney in Building T-1129, located at the northwest corner of the furnace room. Measuring 3'-3" square, the chimney walls are constructed of buff-colored common brick laid in running bond. Portland cement appears to have been used for mortar. The flue is made of 18" diameter fire clay. The T-1129 chimney stands on a reinforced concrete footing 5'-0" x 5'-0" x 2'-0" thick and rises 33'-0" from the concrete-lined furnace room through the upper floors, within the barracks. The stack on the roof is approximately 9' tall.[11]

7. Openings:

   a. Doorways and doors: There are four doorways in the exterior of Building T-1129: (a) the main entrance with double doors in the east wall; (b) the double entry to the furnace room at the east end of the north side; (c) the single exit door for the first-floor squad room; and (d) the single exit door for the second-floor squad room.

      All exterior doorways and doors are of standard design. The architraves consist of a simple wooden boards. The design of the doors is identical: four lights over three horizontal recessed panels. The exterior doorways and doors are painted warm gray, the original color.

   b. Windows: There are two types of windows in Barracks T-1129: double-hung and single-sash. The double-hung windows are of the standard design found in all 700 and 800 Series mobilization buildings -- eight-over-eight-light sash. In T-1129, the double-hung windows appear in all but the southeast corner of the building. Outside the first-floor shower room, there are two single-sash hopper windows consisting of four lights operable on a hinge. The architrave of all windows is of the same simple board construction as the doorways. Sills and "cornice" boards project slightly from the face of the surrounds.

8. Roof:

   a. Shape, covering: The roofs of all 74-Man barracks are low-pitched gable,

with the gable end facing the street. The ridge of the Building T-1129 roof runs east-west. The roof structure is composed of ridge beam and rafters. A wooden decking is covered with red asphalt shingles, which may be the original covering.[12]

b. Cornice, eaves: In all 800-Series mobilization buildings, the eaves project only slightly on the longitudinal elevations. On the north and south sides of Building T-1129, the eaves project about 5". The fascia consists of simple boards affixed to the ends of the rafters. The soffit boards, which appear to be plywood, are nailed the under sides of the attic joists.

C. Description of the Interior:

1. Floor plans:

a. Basement: There a crawl space but no basement, and there is no excavation below grade.

b. First floor: It should be noted that the plan of Building T-1129 is the reverse of the standard design in Drawing 800-443, which furnished the floor plans for construction. Otherwise, the arrangement of Building T-1129 follows closely the standard design. At Camp McCoy, the plan orientation was reversed in alternate barracks so that they could share a common coal pad.

The first floor is entered through the east entrance. There is a vestibule, followed by a stairhall. The stairs on the right lead up to the second floor. To the left is the door to the washroom, which is the center of a suite of three rooms. The eastern room contains the barracks showers, and the western room the toilets and urinal. North of the entry hall is the furnace room, which is accessible only through the exterior doors. The furnace room is at grade, below the level of the rest of the first floor. At the end of the stairhall is the first-floor squad room, which is undivided and comprises the remaining 65' of the barracks. Originally the room contained bunks for thirty-two enlisted men.

c. Second floor: The interior staircase ascends to a stairhall on the second level. To the south are doorways leading into two, non-commissioned officer rooms, which have been (since the war) opened into a single suite. Initially, one room housed two men, and the other, three. At the east end of the hall is a door to a three-man non-commissioned officer room, and on the north side is the entrance to a fourth non-commissioned officer room, for two men. Like the first floor, the remaining 65' of the second floor is occupied by a squad room for thirty-two enlisted men.

FORT McCOY, BUILDING T-1129 (BARRACK)
[Camp McCoy, Building T-1129 (Barrack)]
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2. Stairways: There is a single stairway in the interior of Building T-1129: a box stair located in the entryhall that rises one flight to the second-floor. The stair structure is composed of the same framing system as the rest of the building. Along the interior of the stairway, a hard, 1/4" thick, manufactured wall-board is used as a wainscoting, above which are plywood panels and sections of particle board. The stair rails are 2" x 4"s. The original softwood treads were replaced in 1945 or 1946 with the current hardwood treads for longer wear. In the second-floor hall, a solid balustrade runs along the south edge of the stairway.[13]

3. Flooring: The floor of the furnace room is reinforced concrete, and the floor of the wash and toilet rooms is poured concrete. All other floors in the barracks are of unfinished softwood and are constructed with 3-1/4" wide boards. The flooring is laid on a wooden sub-floor.[14]

4. Wall and ceiling finishes: In the wash and toilet rooms, all walls are covered with horizontal, unfinished softwood boards measuring 7-1/8" in width, 3/4" in thickness, and approximately 11' in length. The same-sized boards are used for the ceiling in the two rooms. In the shower room, the hard manufactured board mentioned above covers the walls and ceilings and apparently is water resistent. The board is nailed to a gypsum-board base.

   On the walls of the first-floor entry of hall, the stairway formula of hard board, plywood panels, and particle, or "insulation board" is followed. In the first-floor squad room, a 6'-0" high hard-board wainscot is used, surmounted by insulation board. The joists are exposed in both the entry hall and squad room.

   In the second-floor squad room, the same wall covering as in the room below is used to cover the exterior walls. The ceiling is covered by insulation boards, held in place by 2-1/8" wooden battens. The same exterior wall and ceiling pattern is followed in the non-commissioned officer rooms, but the interior partitions are faced on one side only with insulation board.[15]

5. Openings:

   a. Doorways and doors: There are two types of doors in the interior of the barracks. The more common type is a standard issue, solid door with five horizontal recessed panels, unfinished. This door is found between the entry hall and the first-floor squad room and in the doorways of three of the four non-commissioned officers on the second-floor. The other type is of the same design as the exterior doors--four-lights over three panels. The double vestibule doors are of the second type; the wood is unfinished. Original screen doors adjoin the vestibule doors on the outer side. The two-screen wooden frames vary in construction and may have been assembled from salvaged materials. The original doors have been removed between the wash room and entry hall and between the second-floor stairhall and the east non-commissioned officer room.

b. Windows: The interior architraves of the double-hung windows consist of 1" x 2" boards.

6. Hardware: The exterior doors have lost their original cast-iron knobs. In the interior, the surviving doors retain their cast-iron knobs and rim locks, painted black. The double-hung windows operate on a standard spring system, in which metal pins with springs are released into holes in the jambs. The single-sash shower-room windows operate on hinges and are opened and closed by means of a chain.

7. Mechanical equipment:

a. Heating, ventilation: Originally, the building was heated with a Lennox "Torrid Zone" furnace (AC-736, T24), which was installed in most of the barracks at Camp McCoy and operated on coal. The fuel was unloaded in a concrete coal pad to the north of Building T-1129 and the furnace was stoked by hand. The manufacturer of the furnace was the Lennox Furnace Co., then headquartered in Marshalltown, Iowa, and Syracuse, New York. The Torrid Zone furnace produced forced hot air, which was circulated through the barracks by means of sheet metal ducts. Apparently the coal furnace also originally fired a large hot water tank in the furnace room. The exhaust from the furnace was vented by asbestos flues to the chimney.

The ductwork is exposed on the first and second floors and runs from the furnace room along the entry corridor, with vents inserted in the walls of the wash, toilet, and shower rooms. Another duct runs down the middle of the first-floor squad room. The same pattern is repeated on the second floor, affording heated air to the non-commissioned officer rooms and the squad area.

Ventilation of hot air from the building occurs via seventeen screened vents located in the ceiling of the second floor. Two round sheet metal ventilators are located along the ridge of the roof (note that Plan No. 800-444 called for wood louvered ventilators). There are also two rectangular louvered vents located in the gables of the east and west end walls.

b. Lighting: All lighting fixtures have been removed from the two squad rooms. Original porcelain wall sockets with incandescent bulbs survive in the washroom, and the 1942 metal dish light fixture is still in place in the toilet room.[16]

c. Plumbing: All plumbing is located in the wash and toilet rooms of the first floor. The original pipes are exposed in the three rooms and all appear to be unaltered: cast-iron, painted black, possibly with lead joints.

FORT McCOY, BUILDING T-1129 (BARRACK)
[Camp McCoy, Building T-1129 (Barrack)]
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d. Fixtures: Nearly all of the fixtures also are original: the six porcelain toilets, single porcelain urinal trough, six porcelain lavatories, the pipes of one of the initial group showers, and a metal laundry sink. The accoutrements of each fixture are in place as well: metal soap dishes, mirrors with wooden frames, and metal toilet tissue holders. One original shower head survives.

D. Site:

1. General setting and orientation: Building T-1129 faces east onto South S Street. On the east side of S Street is an open field used by the Army for helicopter landings and take-offs. To the north is a barracks, Building T-1130; to the south is a mess hall, Building T-1128. To the west is the other company street in Block 11, South R Street, on which stand a full group of seven barracks, four mess halls, and four former company administration buildings.

2. Historic landscape design: The site around Building T-1129 and its north and south neighbors was graded carefully for drainage in 1942. A drainage ditch runs north-south between the east front of the barracks and the street. Causeways run across the ditch to the front entrance of the building and to the walk located along the south side of the barracks and to the coal bin on the north.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: The following Standard War Department drawings were devised especially for the construction of 74-Man barracks such as Building T-1129: 800-443, 800-444, 800-445, 800-446, and 800-447. All of these plans are dated July 30, 1941. In addition, the following general standard drawings were used in the construction of the barracks that were also used to erect several other building types in the 800 Series: 800-120, 800-121, 800-134, 800-135, 800-142, 800-151, 800-154, 800-157, 800-185, 800-186, 800-187, 800-190, 800-194, 800-196, and 800-199 (see Bibliography for the full citation of each drawing). These latter plans range in date from May 1941 to April 1942. Two specialized drawings for the chimneys at Camp McCoy, Plan No. 6150-11-B and 6150-12-B, were prepared by the Area Engineer, dated May 16, 1942, and April 18, 1942, respectively.

Many of these drawings are stamped with the words "Record Drawing" and are presumed to represent closely what was built. In a few instances, dimensions and details of the executed building vary from those in the standard plans. Field notations were essential as a check against the drawings.

Photographic copies of all the above plans are included in the HABS photographs. The original sepia copies and blueline prints are located in the 800 Series map files in the "Meatlocker" storage room, Building 2145, Fort McCoy.

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[Camp McCoy, Building T-1129 (Barrack)]
HABS NO. WI-308-A (page 12)

B. Early Views: No construction photographs of Building T-1129 could be found in the archives of the Directorate of Engineering at Fort McCoy. As already noted, a few such photos were published in area newspapers.

C. Bibliography:

1. Primary and unpublished sources:

a. Standard War Department Drawings

i. Office of the Quartermaster General. Construction Division. "Mobilization Buildings. 74 & 63 Man Barracks . . .Plans," Plan 800-443, July 30, 1941.

ii. _____. _____. "Mobilization Buildings. 74 & 63 Man Barracks . . . Framing Elevations," Plan 800-444, July 30, 1941.

iii. _____. _____. "Mobilization Buildings. 74 & 63 Man Barracks . . . Misc. Details," Plan 800-445, July 30, 1941.

iv. _____. _____. "Mobilization Buildings. 74 & 63 Man Barracks . . . Electrical & Plumbing," Plan 800-446, July 30, 1941.

v. _____. _____. "Mobilization Buildings. 74 & 63 Man Barracks . . . Heating," Plan 800-447, July 30, 1941.

vi. _____. _____. "Mobilization Buildings. 29'-6" Wide Bldg.-Bearing Partitions. Two Story . . . Typical Plan, Elevation & Sections," Plan 800-120, May 28, 1941.

vii. _____. _____. "Mobilization Buildings. 29'-6" Wide Bldg.-Bearing Partitions. Two Story. Structural," Plan 800-121, May 28, 1941.

ix. _____. _____. "Mobilization Buildings. 29'-6" Wide Building with Two Rows of Posts 9'-10" O.C. Two Story-Architectural Typical Plan, Elev., & Sections," Plan 800-134, July 30, 1941.

x. _____. _____. "Mobilization Buildings. 29'-6" Wide Building with Two Rows of Posts-9'-10" O. C. Two Story. Structural," Plan 800-135, July 30, 1941.

xi. _____. _____. "Mobilization Buildings. Alternate Platform Construction. 25'-0" & 29'-6" Wide Bldg.-Two Story

Posts & Bearing Partitions. Sections & Details," Plan 800-142, Oct. 15, 1941.

xiii. _____. _____. "Mobilization Buildings. Standard Window Details. Types, Schedules, & Details," Plan 800-151, May 3, 1941.

xiv. _____. _____. "Mobilization Buildings. Standard Door Details . . .," Plan 800-154, May 3, 1941.

xv. _____. _____. "Mobilization Buildings. Standard Heating Details. Steam Heating & Utility Systems," Plan 800-157, May 3, 1941.

xvi. _____. _____. "Mobilization Buildings. Miscellaneous Details. Interior & Exterior Details," Plan 800-185, May 3, 1941.

xvii. _____. _____. "Mobilization Buildings. Miscellaneous Details. Interior & Exterior Details," Plan 800-186, May 3, 1941.

xviii. War Department. Office of the Chief of Engineers--Construction Division. Washington, D. C. "Mobilization Buildings. Miscellaneous Details. Interior & Exterior Details," Plan 800-187, April 29, 1942.

xix. Office of the Quartermaster General. Construction Division. "Mobilization Buildings. Standard Details. Smoke Pipe & Flue Details," Plan 800-190, May 12, 1941.

xx. _____. _____. "Mobilization Buildings. Standard Plumbing Details," Plan 800-194, May 12, 1941.

xxi. _____. _____. "Mobilization Buildings. Standard Heating Details. Warm Air Heating. Smoke Pipes & Vent Hoods for Ranges," Plan 800-196, May 3, 1941.

xxii. _____. _____. "Mobilization Buildings. Standard Electrical Details," Plan 800-199, May 12, 1941.

b. Drawings Produced at Camp McCoy

Office of the Area Engineer. Camp McCoy Project, General Layout Plan. Plan No. 6150-1-L-A, May 23, 1942. [Plan showing the assignment of

construction areas.]

Office of the Area Engineer. Camp McCoy Project, Mobilization Buildings Chimney Details, Plan No. 6150-11-B, May 16, 1942. Chimney Footing for 74-Man Barracks, Plan 6150-12-B, revised April 18, 1942.

c. Other original records at Fort McCoy

"Real Property Record. Buildings and Structures. Building T-1129," May 29, 1943. In card file, "Meatlocker" storage room, Building 2145, Fort McCoy.

2. Secondary and published sources:

Fine, Lenore and Jesse A. Remington. *The Corps of Engineers: Construction in the United States*. Washington D.C.: Office of the Chief of Military History, U.S. Army, 1972.

Wasch, Diane, and Perry Bush. "The Historical Context of World War II Temporary Structures: The U.S. Army." Washington, D.C.: Historic American Buildings Survey/Historic American Engineering Record, National Park Service, 1988.

[The following newspaper articles are arranged in chronological, rather than alphabetical order]

"To Condemn 9600 Acres for McCoy; Petition to Be Filed Monday." *Sparta Herald*, February 9, 1942, p. 1.

"Work Started on McCoy Building." *Monroe County Democrat*, February 19, 1942, p. 1.

"Work at McCoy Scheduled to Start About March 20; Bids to Close March 7th." *Monroe County Democrat*, February 26, 1942, p. 1.

"Closing Date for McCoy Bids Nears." *Sparta Herald*, March 16, 1942, p. 1. 7.

"More Contracts Being Let at McCoy Cantonment." *Monroe County Democrat*, March 26, 1942, p. 1.

"More Wisconsin Concerns Get Contracts At McCoy." *Monroe County Democrat*, April 2, 1942, p. 1.

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"Construction at Camp McCoy Getting Along; The Place Is Seething with Activity." *Monroe County Democrat*, April 16, 1942, p. 1.

"Government Buys Lumber for Army Cantonment." *Monroe County Democrat*, April 23, 1942, p. 1.

"Where Soldiers Will Live at New McCoy." *Sparta Herald*, August 31, 1942, p.1.

D. Likely Sources Not Yet Investigated:

1. Documentary: Information on the Madsen, Schumacher, Watson, and Associates contracting firm is probably available in St. Paul, Minnesota, research libraries. In addition, more information may be available in the National Archives and other archives in the Washington, D. C., area regarding George E. Bergstrom and the other designers who produced the 800-Series of Standard Drawings.

2. Oral History: Interviews could be conducted with several people locally who worked on the construction of Camp McCoy. In particular, a Mr. Schroeder of the Schroeder contracting firm of Sparta worked for one of the contractors during 1942. Also, it would be worthwhile to attempt to locate Everett C. Hayden, the Area Engineer who supervised the construction of Camp McCoy or his assistant, David C. Lamoreaux. Both men would probably be in their early eighties, if still living. Both reached the rank of Lieutenant Colonel in the Corps of Engineers.

E. Supplemental Material:

1. Historical Photographs: A photocopy of the newspaper photographs of the exterior and interior of a sample barracks is included.

2. Original drawings and plans: Blueprint or blueline copies of all plans listed in the Bibliography are included as supplemental material.

Prepared by: James A. Glass, Ph.D.
Field Supervisor
Fort McCoy Project
September 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided

at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Well, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect and project leader, and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (CERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

NOTES:

1. Sepia copy of Standard War Department Drawing 800-443, map file, "Meatlocker" storage room, Building 2145, Fort McCoy; "Construction at Camp McCoy Getting Along." *Monroe County Democrat*, April 16, 1942, p. 1; "Real Property Record. Buildings and Structures--Post Building 1129," card in file drawers in "Meatlocker."

2. Diane Wasch and Perry Busch, "World War II Temporary Structures: The U.S. Army" (Washington, D.C.: Historic American Buildings Survey/Historic American Engineering Record, National Park Service, September 1, 1988), pp. 31-35 and Standard War Department Drawing 800-443.

3. "To Condemn 9600 Acres For McCoy." *Sparta Herald*, February 9, 1942, p. 1.

4. "Work at McCoy Scheduled to Start About March 20." *Monroe County Democrat*, February 26, 1942, p. 1; "Closing Date for McCoy Bids Nears." *Sparta Herald*, March 16, 1942, p. 1; "More Contracts Let at McCoy Cantonment." Monroe *County Democrat*, March 26, 1942, p. 1; "Construction at Camp McCoy Getting Along." *Monroe County Democrat*, April 16, 1942, p. 1; "Government Buys Lumber for Army Cantonment." *Monroe County Democrat*, April 23, 1942, p. 1; and Plan No. 6150-1-L-A, Camp McCoy Project, General Layout Plan.

5. "Where Soldiers Will Live at New McCoy." *Sparta Herald*, August 31, 1942, p. 1; "Real Property Record--Buildings and Structures--Building 1129," "Meatlocker" file drawer.

6. It should be noted that the shiplap siding was used at McCoy for the warehouses and other service structures of Block 21 and for the stockade and motor pool structures in Block 23.

7. Wasch and Busch, p. 35.

8. "Real Property Record--Building 1129," Building 2145; Standard War Department Drawings 800-443, 800-444.

9. Standard War Department Drawings 800-443 and 800-444; Area Engineer, Camp McCoy, "Chimney Footing for 74-Man Barracks," revised April 18, 1942, Plan No. 6150-12-B, from map file Drawer 15, Meatlocker storage room.

10. Standard War Department Drawings 800-443, 800-444, 800-445, and 800-120.

11. Standard War Department Plan 800-445, and Plans 6150-11-B and 6150-12-B.

12. The "Real Property Record" card for Building T-1129 does not record any replacement of the shingles.

13. Standard War Department drawing 800-445; Post Engineer report (Fort McCoy), 1946.

14. Post Engineer report (Fort McCoy), 1946

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15. Standard War Department Drawings 800-445, 800-134.

16. Standard War Department Drawing 800-199.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-1129 (BARRACK) HABS NO. WI-308-A
[Camp McCoy, Building T-1129 (Barrack)]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-A-1 GENERAL VIEW FROM SOUTHEAST. BUILDING T-1128 ON THE LEFT AND BUILDING T-1130 ON THE RIGHT

WI-308-A-2 SOUTH AND EAST FACADES FROM THE SOUTHEAST, COAL BIN ON RIGHT

WI-308-A-3 SOUTH FACADE FROM THE SOUTHEAST

WI-308-A-4 WEST AND SOUTH FACADES FROM THE SOUTHWEST

WI-308-A-5 GENERAL VIEW OF THE EAST AND NORTH FACADES FROM THE NORTHEAST

WI-308-A-6 EAST FACADE FROM THE EAST-NORTHEAST

WI-308-A-7 WEST FACADE

WI-308-A-8 DETAIL OF A TYPICAL WINDOW ON THE SOUTH FACADE

WI-308-A-9 DETAIL OF CEMENT-ASBESTOS SIDING AND WOOD FOUNDATION SKIRTING ON THE SOUTH FACADE

WI-308-A-10 DETAIL OF CONCRETE FOUNDATION PIER AND WOOD PERIMETER GIRDER

WI-308-A-11 DETAIL OF LENNOX FURNACE COMPANY "TORRID ZONE" COAL FURNACE

WI-308-A-12 SINK IN THE WASH ROOM, AND TOILET AND TROUGH URINAL IN THE TOILET ROOM

WI-308-A-13 SINKS, SHELVES, AND MIRRORS IN THE WASH ROOM, AND TOILETS AND COAT LOOKS IN THE TOILET ROOM

WI-308-A-14 VIEW OF FIRST-FLOOR HALL AND STAIRS TO SECOND FLOOR, FROM ENTRYWAY

WI-308-A-15 FIRST-FLOOR SQUAD ROOM LOOKING WEST

WI-308-A-16 SECOND-FLOOR SQUAD ROOM LOOKING EAST

WI-308-A-17 DETAIL VIEW OF ROOF FRAMING IN ATTIC

BUILDING T-801

STOREHOUSE, ADMINISTRATION AND RECREATION BUILDING

Figure 63. *Perspective view of south (front) and west side.*

Figure 64. *Interior of north office room from doorway to south office room.*

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-801 (STOREHOUSE, ADMINISTRATION & RECREATION BUILDING)
[Camp McCoy, Building T-801 (Storehouse, Administration & Recreation Building)]
HABS NO. WI-308-B

Location: On the north side of East 12th Avenue, west of East O Street, in Block 8 of the triangular plan of the main post, Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.

Present Owner: Department of the Army

Present Use: Now used as a testing center and storage building during part of the year.

Significance: Building 801 is of interest on a local and regional basis as a nearly unaltered example of a building type that may have been erected only at Camp McCoy--the combined company storehouse, administration, and recreation building. It was in such buildings that the administrative and social life of each company trained at the camp was centered.

The storehouse section of the 801 building also exhibits the exterior and roof structure used in most buildings erected in 1942 from the 800 Series standard War Department plans.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Separate Standard War Department 800 Series drawings for (a) company recreation building and (b) company storehouse and administration building are dated May 23 and June 3, 1941, respectively. At Camp McCoy, the two plans were combined in the early spring of 1942 to produce approximately 124 single buildings. Construction of Building 801 began in April 1942 and was completed on July 29, 1942.[1]

2. Architect: George E. Bergstrom, Chief of the Architectural Unit in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the revision of the 700 Series of standard drawings that produced the 800 Series of plans. Lt. Col. Hugh J. Casey, Chief of Design and Engineering in the Engineering Branch, authorized and approved the 800 Series designs for company storehouse and administration and company recreation buildings. The combination of the two standard designs at Camp McCoy was apparently directed by Lt. Col. Everett C. Hayden, the Area Engineer during construction of the camp in 1942.[2]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[3] The owner from 1942 to 1947 was the War Department.

FORT McCOY, BUILDING T-801 (STORE HS, ADMIN, REC)
[Camp McCoy, Building T-801 (Store Hs, Admin, Rec)]
HABS NO. WI-308-B (page 2)

Since 1947, the U. S. Department of the Army, the successor to the War Department, has held title.

4. Builder, contractor, suppliers: Building 1129 was part of construction area F, which was built by the St. Paul, Minnesota, firm of Madsen, Schumacher, Watson and Associates. Bids for construction of the cantonment were advertised in February 1942 and contracts were awarded in late March. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building 801 and the rest of the cantonment at auctions held in the Upper Midwest region during the spring of 1942. Other materials used in construction--concrete, cement asbestos siding, wall board, furnace and ductwork, plumbing and electrical fixtures, etc.--were apparently provided by subcontractors from the Wisconsin area.[4]

5. Original plans and construction: Few changes have been made to the exterior or interior of Building 801. Record copies of the sixteen standard War Department drawings used to construct all 124 of the combination company buildings at Camp McCoy have been preserved by the Directorate of Engineering at Fort McCoy and are currently kept in "As Built" envelope files in Building 2111. The original Vandyke master copies of the standard plans are kept in the 800 Series map files in the "Meatlocker" storage room in Building 2145. None of the construction photographs taken by the Army Signal Corps of Camp McCoy company storehouse, administration, and recreation buildings could be found at Fort McCoy. A few views were reproduced in the Sparta newspapers in August 1942. The cost of construction for Building 801 was $13,461.[5]

6. Alterations and additions: On the exterior, the grayish-white cement asbestos siding has been replaced in a few spots on all elevations with either white or gray-striped cement pieces of the same size. Two screen frames have been removed from windows on the west. Otherwise no alterations from the 1942 appearance of the exterior are obvious.

   In the interior, the only apparent changes from the original appearance involve the removal of the two Cannon stoves in the storehouse and administration portion and the paint applied to all wall and ceiling surfaces, which originally were unpainted.[6]

B. Historical Context:

The construction of Building T-801 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as Building T-801, the 1939 housing capacity of 200,000 was increased to 6,000,000 persons by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are

significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building 801 was one of approximately 124 combined company storehouse, administration, and recreation buildings erected at "New" Camp McCoy, which in turn was one of fifteen mobilization cantonments built by the War Department in the United States between late 1941 and the beginning of 1943. The 1941-43 cantonments were constructed to house and serve as bases for training approximately 525,000 men drafted for Army service after the United States entered World War II in December 1941.[7]

Two newly organized Army divisions occupied Camp McCoy during their training. The Second Army Division arrived at the cantonment soon after completion of construction, in the fall of 1942, and remained for a year, until November 1943, leaving for action in the Italian campaign. The 76th Division then took over the camp for a year, departing for service in the liberation of Western Europe in December, 1944. In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year, the personnel center assumed the role of discharging veterans as the war came to a close. The personnel center closed in May 1946, and most other functions at the camp halted a year later.[8]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of regular, reserve, and National Guard units in the Fifth Army area for service in the Korean War. A reassignment and separation center was also opened at the camp during the conflict. Since 1953, the camp has become a center for training reserve units of the Army and National Guard regiments of the Midwest region.[9]

When fully occupied during World War II, the cantonment area of Camp McCoy housed approximately 35,000 people. The camp was laid out in twenty-eight blocks, twenty of which housed troops and officers. Each block was occupied by six to ten companies. Block 8 contained nine companies, each of which lived in roughly three 74-man barracks and occupied one company storehouse, administration, and recreation building. Building 801 served as headquarters for a company that occupied the three barracks immediately to the east on East R Street.[10]

The combination of the storehouse and administration design with the recreation building plan at Camp McCoy produced a single headquarters for each company. At the south end of Building 801 was the company office and the office of the first sergeant. Next was a storeroom for company supplies. At the rear of the combined building was the recreational section, consisting of a day room and study room. The interior of Building 801, in which the only change has been the application of paint, readily recalls the setting in which the officers of each company at Camp McCoy administered their unit and the men studied and relaxed.[11]

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PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building 801 is a well-preserved illustration of a building type that may be unique to Fort McCoy: the combined company storehouse, administration, and recreation building. Originally, some 124 such buildings were erected in the cantonment. Since World War II, many have been adapted to other uses and remodeled. Building 801 is one of only a handful that still exhibit the room arrangement, exposed softwood floors (in the recreation section), and lighting fixtures that characterized all the company headquarters initially.

Of special interest in the interior of the storehouse portion of the 801 building is the exposed construction of the exterior walls and roof. The studs, girts, diagonal braces, knee braces, plates, sheathing, trusses, and roof decking of the structure are all visible in the utilitarian storehouse room. Building 801 can be used to study not only the construction of the company building type but most of the other types erected at Camp McCoy. Standard structural designs were used in nearly all the cantonment buildings.[12]

2. Condition of fabric: The general condition of Building 801 is good. More specifically, the cement asbestos siding is mostly in good condition, with occasional pieces above the foundation cracked or broken. The wooden foundation skirting shows slight weathering on the west and north walls, and several boards are rotted at their lower edges on the east. The concrete block foundations of the administration and storehouse section and of the furnace room in the recreation section are in good condition, as is the roof. The soffits and fascia on three sides are in good condition, with pronounced weathering visible on several fascia boards of the west side. All wooden surfaces on the exterior (windows, doorways, soffits, fascia, and skirting) exhibit some weathering and peeling paint.

The interior features are all in good condition, with no deterioration in specific elements obvious.

B. Description of the Exterior:

1. Over-all dimensions: Building 801 is rectangular in shape and is 25'-0" wide and 130'-0" long. The storehouse and administration portion of the building is one story high, and the recreation section is a story-and-a-half. The lower part of 801 rises approximately 13' from grade to roof ridge, and the rear section rises approximately 17'.[13]

There are thirteen bays (windows and doorways) in the west side wall of Building 801, and twelve in the east. The south front contains four bays, and the north rear, three bays. The arrangement of bays in the west and east walls of both the storehouse and recreation sections is asymmetrical, the design determined chiefly

by interior requirements. In the narrow south and north ends, the bays are ordered symmetrically.

2. Foundations: The foundations of the company storehouse and administration section are of concrete block. The footings, also of concrete, are 16" wide and 12" deep. The concrete block foundation walls are 8" thick and range in height from about 1' near the recreation section to 2-1/2' at the south. The blocks are smooth faced, and the joints are filled with Portland cement mortar.

   The foundation and lower wall of the heater room on the south side of the recreation section is likewise constructed of concrete block, also 8" thick. The heater room wall is approximately 4' high.

   The remainder of the recreation portion of the building is supported by three longitudinal rows of 1'-0" square concrete piers resting on concrete footings 2'-0" square, sunk 1'-0" below grade. Two rows of piers support the exterior walls, while the third bears the center of the structure. The piers are 10'-0" apart on center. There is no cellar excavation. The 17" crawl space below the recreation section is covered by wooden skirting composed of 20" x 7-1/2" vertical boards affixed to the foundation girders and sills fitted into slots in the exterior piers. There are four rectangular access holes in the skirting on the west, three holes on the east, and one on the north.[14]

3. Walls: The exterior walls of both sections of Building 801 consist of three layers: (a) a wooden sheathing composed of 7-1/8", tongue and groove boards, (b) a black construction paper, which acts as a vapor barrier, and (c) siding composed of cement asbestos pieces measuring 11" x 24", the standard size used throughout the cantonment.[15]

4. Structural system, framing: Building 801 and the other one-story buildings erected from the 800 Series standard plans are of balloon construction. The frame of the exterior walls rests on 8" x 10" wooden girders, each composed of four, 2" thick boards. In the storehouse section, the girders are supported by the concrete foundation; in the recreation section by the exterior concrete piers. Each of the two sections in Building 801 is composed of four corner posts and intermediate studs, girts, and plates.

   In the storehouse section, four diagonal braces running between the foundation girder and the plate reinforce the west and east walls; two such braces reinforce the corner bays of the south front. In the recreation portion, braces reinforce only two bays on the longitudinal walls, the second bays from each end. Corner braces are found on the north.

   The joists of the main floor in the recreation section are borne by a north-south girder supported by the center row of foundation piers. The joists are 2" x 10", spaced apart 2'-0" on center. There are no central posts above the interior girder,

the roof trusses being clear-span. The interior partition dividing the storehouse and recreation portions contains the stud and girt structure of the exterior walls and is load-bearing.

The roof structure is identical in both sections of Building 801. The rafters are each supported by a modified king-post truss, consisting of a standard size, 5-1/2' x 1-5/8" board functioning as a king-post, a tie-beam running between the east and west plates, braces running between the tie-beam and rafters. Along the north-south axis, diagonal braces reinforce the king-posts and a north-south horizontal beam running between the tie-beams. There are no purlins.[16]

5. Porches, stoops: The record drawing version of the standard drawing for the recreation section of Building 801 shows four wooden entry porches on the two longitudinal sides. Nevertheless, at 801 and at every other building with exterior stairways in the cantonment area, there are instead poured concrete stoops with cast-iron rails. It seems likely, given the universal presence of the concrete stoop on all building types, that the more permanent material was substituted for wood by the Area Engineer, Lt. Col. E. C. Hayden.

   The concrete stoops on the west and south provide access to the day and study rooms inside, which are elevated approximately 3' above grade. The northern stoops are about 30" high; those to the south are 34" high. The iron rails are painted black and are joined with aluminum fittings.

   In front of each of the two south entries to the company administration section, there is a concrete platform at grade, with a single iron rail.

6. Chimneys: Rising from near the center of the recreation section of Building 801, from within a concrete block cubicle adjacent to the heater room, a brick chimney measuring 30" square ascends to a height of 30'-0" above grade, approximately 13' of which extends above the roof. The chimney is constructed of buff common brick laid in running bond, with Portland cement mortar. The flue pipe within is made of fire clay, and the flashing on the roof is metal. When in use, the stack served as the exhaust for the fumes emitted by the coal-burning furnace.

   Two metal flue pipes for the Cannon stoves that formerly stood at the north end of the storeroom and north side of the company office are visible on the east slope of roof in the storehouse and administration section. In both instances, a cylindrical pipe ascends through the roof and emerges within a four-sided metal casing nailed to the roof. The cylinder re-emerges above the casing and terminates just below a conical cap.[17]

7. Openings:

   a. Doorways and doors: The largest door in the combined design represented by Building 801 is the heavy door to the company storehouse,

located near the center of the west wall of the southern section. The wooden door is of board and batten construction, with the boards measuring 7'-8-1/2" vertically, 5-1/8" in width, and 3/4" in thickness. The two horizontal battens on the interior side of the portal each are 5-3/8" x 1/2". The door as a whole measures 9'-3" wide and 7'-9" tall.

The storehouse door slides horizontally, hung with bolts to two sets of rollers within a 2" square, cast-iron track immediately above. The track is fastened in turn to a 7" wide and 1-3/4" thick wooden beam. At the north and south ends of the rail are 2-3/8" thick blocks of wood, acting as doorstops.

The other eight doors in the exterior of Building 801 are all of standard design. Each measures 2'-7-1/2" wide and 6'-8" high, and each contains four lights in its upper half and three horizontal recessed panels in its lower section. Six of the standard doors hang in the single doorways of the south, east, and west walls. Two form the double entry into the heater room on the west side of the recreation section.

b. Windows: There are three types of standard 800 Series window designs in Building 801 and the other combined company storehouse and recreation buildings. Standard Type A, consisting of eight-lights-over-eight-lights and measuring 3'-4-4/16" x 4'-6", appears in twenty-one openings on the west, south, east, and north. Standard Type C, composed of six-over-six-lights and measuring 2'-7-1/16" x 4'-6" appears only once, providing light to the heater room, north of the furnace entry. The third type, E, consists of four-over-four-lights and appears outside the two water closets, one at the north end of the east wall, and the other at the south end of the west wall. The narrow openings measure 1'-7-3/16" by 4'-6".

All the windows in the building are double-hung sash. The architraves of the openings is of the same simple board design found in the other mobilization building types. Surrounds and sash are both painted a yellow color, now rapidly peeling.

Wire insect screens hang on the outside of all windows except the heater room opening and the northernmost window on the west side of the storehouse section. The screens are of standard issue, held in wooden frames. The second bay of the east wall and the third of the west wall in the storehouse section are covered with security screens, composed of a heavy wire mesh soddered to a metal rod bolted in turn to a wooden frame. These screens are also of standard design and may have hung originally on all the storehouse windows.[18]

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8. Roof:

a. Shape, covering: The roofs of both sections in the 801 building are low-pitched gable, the recreation portion pitched about 1-1/2' higher than the storehouse section. The roof covering is red asphalt shingles. According to the real property records of the Directorate of Engineering, the building was re-roofed with the same material in 1964.[19]

b. Cornice, eaves: The boards composing the fascia of the building are each approximately 14' long, 9" wide, and 7/8" thick. The soffit boards, of the same dimensions, are laid at a raking angle, flush with the roof plane.

C. Description of the Interior:

1. Floor plans:

a. Basement: There is no basement in either the recreation or storehouse sections of Building 801: under the former is the crawl-space described earlier; the floor of the latter is at grade.

b. First Floor: There is a split-level first floor. The two doors at the south wall of the company storehouse and administration section lead on the east into the former company office and on the west into the former office of the first sergeant of the company. The two offices are connected with a doorway in between. From the sergeant's room, access can be made to the 25'-0" x 43'-0" company storage room, which occupies the entire width of the building.

A short flight of stairs at the west end of the storehouse leads up into the day room of the recreation section. The east end of the day room occupies the width of the building; the west end narrows between a 6'-0" square water closet on the north side of the building and the heater room for the western portion on the south side. The water closet is entered from the day room; the heater room can be visited only through the exterior doorways. At the center of the west end of the day room, a doorway leads to the former study room, which occupies 25'-0" x 27'-0" at the north end of the recreation section.[20]

c. Attic: There are half-story attics over the company offices and the recreation section. Over the storehouse portion, the trusses and rafters are exposed.

2. Stairways: There is a single wooden stairway communicating between the storehouse and the day room. The five steps consist of hardwood treads laid on an open string framework, with no risers. Simple 3-1/2" x 1-3/8" rails and posts flank the treads.

3. Flooring: In the company storehouse and administration section, a 5" concrete slab reinforced with 4" x 4" wire mesh forms the floor. In the recreation portion, the standard formula for wooden flooring is found: a wooden sub-flooring laid across the joists, construction paper for insulation, and 3-1/2" x 1-3/8", softwood boards. The boards are unfinished in the day room and painted gray in the study room. In the water closet adjacent to the day room, a 3" concrete surface is laid over the sub-flooring.[21]

4. Wall and ceiling finishes:

   a. Storehouse and administration section: In the storehouse proper, the exterior walls and roof structure are exposed and painted a cream color. In the two company offices at the south end, "insulation board," a standard type of fiber board, covers the studs and girts of the exterior walls and the lower 6'-0" of the interior partition between the company office and first sergeant's room. A 1-5/8" wooden batten covers the joint between the upper and lower boards, which are painted cream above the batten and brown below. The studs of the east-west partition are exposed near the ceiling.

   The roof structure in the company office section is covered with ceiling panels composed of insulation boards secured by 1-1/2" wooden battens. Knee braces reinforcing the rafters are exposed on the west and east sides of the offices and run through slots cut in the ceiling.

   In the watercloset adjacent to the first sergeant's room, all four walls carry standard-sized, tongue and groove boards, which are 7-1/8" wide and laid horizontally to a height of about 6-1/2'. Above the boards are insulation panels. The wall surface of the water closet was termed a "P-3 partition."

   The same-sized, tongue and groove boards were used for sheathing in the exterior walls of the storehouse. Another standard size, 5-1/2" x 1-5/8", was used for the studs. The partition between the company offices and storage room is likewise covered on the north side with 7-1/8" tongue and groove boards.

   b. Recreation section: In the two principal rooms of the recreation section, a similar formula for the walls and ceiling is found. Insulation board painted brown covers the lower 4'-0" of the vertical surfaces, while cream-painted fiber board is placed above. The upper panels are secured with wooden battens spaced about 1'-10-1/2" apart. The ceiling panels of the rooms are also painted cream and also held in place with battens nailed to the insulation board at regular intervals. The day room water closet walls and ceiling surface are of the P-3 standard type.[22]

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In the heater room near the center of the recreation section, four courses of concrete block form the lower walls. Above the blocks, the studs and rafters are covered with gypsum board.

5. Openings:

   a. Doorways and doors: In the seven interior doorways of Building 801 hang standard-issue solid wood doors constructed in the typical interior pattern: five, horizontal, recessed panels. All the interior doors and their hardware has been painted brown in the postwar period, possibly during the general painting of 1951.

   b. Windows: The structural members that support the windows of most 800 Series buildings--lintels, sills, and jambs--are exposed in the storehouse walls. In the other rooms, the simple, board architraves seen on the exterior are also found as surrounds in the interior.

6. Hardware: The original rim locks and hinges remain on all interior doors. The spring restraints on the double hung sash windows survive. The initial steel knob on the door between the storehouse and recreation sections has been recently replaced with a brass-plated version.

7. Mechanical Equipment:

   a. Heating, ventilation: In the heater room along the west side of the recreation section, there is a standard, Lennox "Torrid Zone" furnace. Originally the coal-fired furnace supplied forced hot air to the rooms in the north section through aluminum ductwork running from the heater room into the centers of the day and study rooms. A fresh-air intake duct runs from the west wall of the heater room into the furnace; exhaust was discharged via a pipe to the chimney in the corner of the room.

   The company storehouse and administration section was heated separately by Cannon stoves, which originally stood in the storehouse proper and in the company office. Now removed, the stoves were coal-burning. Their fumes were discharged via pipes to metal chimneys above the roof.

   Ventilation in both sections of Building 801 is afforded by means of six metal ventilators located straddling the roof ridges. Hot air rises directly to the ventilators over the storeroom and via screened ventilation panels placed at regular intervals in the ceilings of the offices and recreation rooms. Escape of hot air also occurs through a louvered ventilation panel in the gable of the north wall.

b. Lighting: The original socket fixtures installed in the storehouse and company administration section survive, although mostly unused. Recently, fluorescent light fixtures have been hung from the longitudinal tie beam in the storehouse. In the day room, the 1942 metal bases and globe holders are still in place, arranged in two rows of five holders. All of the glass globes have been removed.

In the former study room, glass globes remain on the four light fixtures.

c. Plumbing and other fixtures: The original cast-iron plumbing fixtures remain in both water closets. Other porcelain fixtures--lavatories, toilets, etc.--also date from 1942.

D. Site:

1. General setting and orientation: The front of Building 801, the south end of the company administration section, faces East 12th Avenue, which runs roughly east-west through Block 8. The east and west sides extend to the north 130'-0". To the east, 50'-0", are three barracks that originally provided housing for the company headquartered in Building 801. To the west, 50', is Building 857, a smaller version of the combined company storehouse, administration, and recreation plan. To the northwest of 801 is Building 856, an M-152 mess hall, which probably served the companies headquartered in Buildings 801 and 857. To the west of the storehouse door is a standard reinforced-concrete coal pad, which was used for supplying the furnaces in both company buildings.

Directly across 12th Avenue from 801 are two buildings that originally pertained to the battalion stationed in Block 8: Building 848, the former battalion administration building, and Building 849, the former guard house for the block.[23]

2. Historic landscape design: The site around Building 801, like those of the other 1,300 buildings erected at Camp McCoy, was designed in 1942 for convenient traffic circulation and adequate drainage. An open drainage ditch dug in 1942 runs east-west between the south wall of 801 and 12th Avenue. To the west of the building, a driveway surfaced with bituminous Macadam and gravel crosses the ditch and proceeds north to Building 856. Branches terminate at the storehouse doors of Buildings 801 and 857.

A graded sidewalk composed of bituminous compound and gravel runs east-west in front of Buildings 857 and 801, with a ditch to the other side. A north-south walk of gravel runs behind the three barracks to the east and intersects with east-west walks running from the two eastern entries to Building 801. The north-south walk crosses the ditch via a causeway and terminates in the gravel shoulder of 12th Avenue.

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PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: The following Standard War Department drawings were devised for use in constructing the SA-2 company storehouse and administration building and the RB-4 company recreation building: 800-661 (SA-2) and 800-460 (RB-4). These drawings are dated June 3 and May 23, 1941, respectively. In addition, the following general standard drawings in the 800 Series were used in the construction of Building 801 and other combined, SA-2/RB-4 structures: 800-100, 800-101,[24] 800-151, 800-154, 800-157, 800-182, 800-185, 800-186, 800-187, 800-190, 800-194, 800-196, and 800-199 (see Bibliography for full citation of each drawing). The general plans range in date from May 1941 to April 1942.

In addition, Lt. Col. E. C. Hayden, the Area Engineer who supervised construction of Camp McCoy, directed in April 1942 that a drawing be prepared depicting the combined design to be followed in the SA-2/RB-4 buildings: Area Engineer Plan No. 6150-1-B. In September 1942, Hayden directed that record copies be made of the standard drawings and supplemental plans used to build the buildings at Camp McCoy. Notations of deviations from the original designs and specifications were indicated in red on the record versions, which after World War II were retained in an "As Built" file by the Post Engineer. Notations of changes were also made on some of the Vandyke master copies of the standard drawings and the words "RECORD DRAWING OF WORK AS BUILT" stamped above the legends.

Field notes were made prior to writing the present report, as a check on the information contained in the 1941-42 plans. The principal deviation noticed from the drawings was in the substitution of poured concrete stoops for wooden entry porches, which was also done with all other mobilization buildings erected at Camp McCoy.

High-quality, photographic negatives and prints of the above drawings accompany this report. The original Vandyke master copies and blueline prints are located in the 800 Series map files in the "Meatlocker" storage room, Building 2145, Fort McCoy. The record drawings prepared for the Post Engineer are found in portfolios kept in the "As Built" files of the Directorate of Engineering, Building 2111.

B. Early Views: No construction photographs of Building 801 could be found in the records of the Directorate of Engineering at Fort McCoy. As already noted, a few such photos of the exterior of the SA-2/RB-4 design were published in area newspapers in 1942.

C. Bibliography:

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Room, 25'0" x 70'-0." Plans, Elevations & Sections," Plan No. 800-460, May 23, 1941.

ii. _____. _____. "Mobilization Buildings. Single Storehouse & Company Administration. Types SA-1 & SA-2 . . . Plans - Elevations & Sections," Plan No. 800-661, June 3, 1941.

iii. _____. _____. "Mobilization Buildings. 25'-0" Wide Building Clear-Span One Story. Architectural Typical Plan, Elevations, & Sections," Plan No. 800-100, May 3, 1941.

iv. [Standard War Department Plan No. 800-101, "25'-0" Wide Building ClearSpan One Story. Structural." No copy could be found at Fort McCoy]

v. _____. _____. "Mobilization Buildings. Standard Window Details. Types, Schedules, & Details," Plan No. 800-151, May 3, 1941.

vi. _____. _____. "Mobilization Buildings. Standard Door Details. Types, Schedules, & Details," Plan No. 800-154, May 3, 1941.

vii. _____. _____. "Mobilization Buildings. Standard Toilet Details," Plan No. 157, 1941

viii. _____. _____. "Mobilization Buildings. Miscellaneous Details. Porch - Breeching & Interior Details," Plan No. 800-182, July 22, 1941.

ix. _____. _____. "Mobilization Buildings. Miscellaneous Details. Interior & Exterior Details," Plan No. 800-185, May 3, 1941.

x. War Department. Office of the Chief of Engineers - Construction Division. Washington, D. C. "Mobilization Buildings. Miscellaneous Details. Interior & Exterior Details," Drawing No. 800-186, April 28, 1942.

xi. _____. _____. _____. "Mobilization Buildings. Miscellaneous Details. Interior & Exterior Details,"Drawing No. 800-187, April 29, 1942.

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xii. Construction Division. Office of the Quartermaster General. "Mobilization Buildings. Standard Details. Smoke Pipe & Flue Details," Plan No. 800-190, May 12, 1941.

xiii. _____. _____. "Mobilization Buildings. Standard Plumbing Details," Plan No. 800-194, May 12, 1941.

xiv. _____. _____. "Mobilization Buildings. Standard Heating Details. Warm Air Heating. Smoke Pipe & Vent Hoods," Plan No. 800-196, 1941.

xv. _____. _____. "Mobilization Building. Standard Electrical Details,"Plan No. 800-199, May 12, 1941.

b. Drawings Produced at Camp McCoy

i. Office of the Area Engineer, Camp McCoy, Wis. "Camp McCoy Project. Camp McCoy, Wis. Typical Layout for RB-4 & SA-2," Plan No. 6150-1-B, Approved April 17, 1942 [blueline drawing attached to record drawing of Plan 800-661 in "As Built" portfolio Building 2111]

ii. _____. "Camp McCoy Project. Mobilization Buildings. Chimney Details," Sheet No. 6150-11-B, May 16, 1942 [blueline print in Drawer 14, map file in "Meatlocker storage room, Building 2145.

iii. _____. "Camp McCoy Project--General Layout Plan [with boundaries of seven construction areas and names of contractors drawn in], Plan No. 6150-1-L, May 23, 1942 [original blueline print on north map file, "Meatlocker" storage room, Building 2145]

iv. [Area Engineer, Camp McCoy]. "Detail of Heating System as Built. Building Type RB-4," [no plan number], September 7, 1942.[blueprint attached to record drawing of Plan 800-460 in "As Built" portfolio uilding 2111]

v. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project. Block Layout Plan Showing Buildings, Roads, Parking Areas, Service Drives, Walks & Coal Pads. Blk. 7 - 8 and 9," Plan No. 6150-4-GL, November 24, 1942 (revised to April 4, 1944) [original linen drawing in Drawer 15, map file, "Meatlocker"]

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vi. _____. "Camp McCoy Project. RB-4 -SA-2 Comb. Bldg. Revised Floor Plan. Also Porch Details," Plan No. 6150-38-B, January 4, 1943 [linen record drawing in Drawer 14, map file, "Meatlocker"]

c. Record Drawing versions of standard plans (in "As Built" portfolios, Building 2111)

i. Standard Plan 800-460, labeled RB-4, notations dated September 17, 1942 [in portfolio]

ii. Standard Plan 800-661, labeled SA-2, notations dated September 17, 1942 [in portfolio]

d. Other original records at Fort McCoy

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2. Secondary and published sources:

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Wasch, Diane and Bush, Perry. "The Historical Context of World War II Mobilization Construction" Unpublished paper. Washington,D. C.: Historic American Buildings Survey, National Park Service, 1988.

b. Newspaper articles (chronological listing):

"To Condemn 9600 Acres for McCoy; Petition to Be Filed Monday," *Sparta Herald*, February 9, 1942, p. 1.

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"Closing Date for McCoy Bids Nears," *Sparta Herald*, March 16, 1942, p. 1.

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"More Contracts Being Let at McCoy Cantonment," *Monroe County Democrat*, March 26, 1942, p. 1.

"More Wisconsin Concerns Get Contracts At McCoy," *Monroe County Democrat*, April 2, 1942, p. 1.

"Construction at Camp McCoy Getting Along; The Place Is Seething with Activity," *Monroe County Democrat*, April 16, 1942, p. 1.

"Government Buys Lumber for Army Cantonment," *Monroe County Democrat*, April 23, 1942, p. 1.

"Where Soldiers Will Live at New McCoy," *Sparta Herald*, August 31, 1942, p. 1.

D. Likely Sources Not Yet Investigated:

1. Documentary: Information on the Madsen, Schumacher, Watson, and Associates contracting firm is probably available in St. Paul, Minnesota, research libraries. In addition, more information may be available in the National Archives and other archives in the Washington, D. C. area, regarding George E. Bergstrom and the other designers who produced the 800-Series of Standard Drawings.

2. Oral History: Interviews could be conducted with several people locally who worked on the construction of Camp McCoy. In particular, a Mr. Schroeder of the Schroeder contracting firm of Sparta worked for one of the contractors during 1942. Also, it would be worthwhile to attempt to locate Everett C. Hayden, the Area Engineer who supervised the construction of Camp McCoy or his assistant, David C. Lamoreaux. Both men would probably be in their early eighties, if still living. Both reached the rank of at least Lieutenant Colonel in the Corps of Engineers.[25]

E. Supplemental Material:

1. Historical Photographs: A photocopy of the newspaper photographs of the exterior of a sample company storehouse, administration, and recreation building is included.

2. Original drawings and plans: Photographic negatives and prints or high contrast blueline prints of all plans listed in the Bibliography are included as supplemental material.

Prepared by: James A. Glass, Ph.D.
Field Supervisor
Fort McCoy Project
September 1988

FORT McCOY, BUILDING T-801 (STORE HS, ADMIN, REC)
[Camp McCoy, Building T-801 (Store Hs, Admin, Rec)]
HABS NO. WI-308-B (page 17)

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

NOTES:

1. Construction Division, Office of the Quartermaster General, "Mobilization Buildings. Single Storehouse & Company Administration. Types SA-1 & SA-2 . . . Plans - Elevations & Sections," Plan No. 800-661, June 3, 1941; Construction Division, Office of Quartermaster General, "Mobilization Buildings. Recreation Building. Type RB-4, 2 Room, 25'-0" x 70'-0". Plans, Elevations & Section," Plan Number 800-460, May 23, 1941. Vandyke copies of both plans are in the 800-Series map file, "Meatlocker" storage room, Building 2145, Fort McCoy. Also, Post Engineer Office, "Historical Data. Camp McCoy, Wisconsin" [typescript copy of original report] (Camp McCoy, January 15, 1946), pp. 10-11; 13 (copy in box marked "Historical Engineering Records," "Meatlocker" storage room); "Construction at Camp McCoy Getting Along," *Monroe County Democrat*, April 16, 1942, p. 1, c. 8; and "Real Property Record. Buildings and Structures--Post Building 801," card in card file drawers, "Meatlocker."

2. See Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States [volume in the series, United States Army in World War II: The Technical Services]* (Washington, D. C.: Office of the Chief of Military History, United States Army, 1972), pp. 347-51; Diane Wasch and Perry Busch, "The Historical Context of World War II Mobilization Construction." Unpublished paper. (Washington, D. C.: Historic American Buildings Survey, National Park Service, 1988), pp. 42-46. In addition, a January, 1943 record drawing of the combination has survived: Office of the Area Engineer, Camp McCoy, Wisconsin, "Camp McCoy Project--RB-4 -SA-2 Comb. Bldg. Revised Floor Plan, Also Porch Details," Plan No. 6150-38-B, January 4, 1943 (linen original drawing in Drawer 14, map files, "Meatlocker").

3. "To Condemn 9600 Acres For McCoy," *Sparta Herald*, February 9, 1942, p. 1, c. 8.

4. Office of the Area Engineer, Camp McCoy, Wisconsin, "Camp McCoy Project--General Layout Plan [with boundaries of seven construction areas and names of contractors drawn in], Plan No. 6150-1-L, May 23, 1942 (original blueline print on map file, "Meatlocker"); "Bids on McCoy Work Started February 14," *Sparta Herald*, February 16, 1942, p. 1, c. 8; "Work at McCoy Scheduled to Start About March 20," *Monroe County Democrat*, February 26, 1942, p. 1, c. 8; "Closing Date for McCoy Bids Nears," *Sparta Herald*, March 16, 1942, p. 1, c. 7; "More Contracts Let at McCoy Cantonment," *Monroe County Democrat*, March 26, 1942, p. 1, c. 8; "Construction at Camp McCoy Getting Along," *Monroe County Democrat*, April 16, 1942, p. 1, c. 8; and "Government Buys Lumber for Army Cantonment," *Monroe County Democrat*, April 23, 1942, p. 1, c. 3.

5. See "Where Soldiers Will Live at New McCoy," *Sparta Herald*, August 31, 1942, p. 1, in the attached supplemental material; "Real Property Record . . . Building 801."

6. The "Real Property Record" card for Building 801 shows that the interior was painted for the first time in 1951 and 1952.

7. Wasch and Busch, pp. 42; 47.

8. Post Engineer Office, "Historical Data," typescript copy of original report, pp. 6-7; handwritten notations on ditto original report, p. 18.

9. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office (?), Fort McCoy, n. d., c. 1985, p. 6; Lou Ann Mittelstaedt, "McCoy's History, 1947-Present," *Triad*, 3, No. 11 (May 29, 1986), p. 5.

10. See Post Engineer, "Historical Data," pp. 10, 36; Office of the Area Engineer, Camp McCoy, Wisconsin, "Camp McCoy Project--Block Layout Plan Showing Buildings, Roads, Parking Areas, Service Drives, Walks & Coal Pads--Blk. 7 - 8 - 9," Plan 6150-4-GL, November 24, 1942, in Supplemental Material section. The three barracks were Buildings 802, 803, and 804.

11. See Standard War Department Plans 800-460 and 800-661, Supplemental Materials section.

12. Only in a few buildings, such as the company storehouse structures, is the exterior structure visible.

13. "Real Property Record . . . Building 801."

14. Record Drawing version of standard War Department Plan No. 800-661, "Single Storehouse & Company Administration - Types SA-1 & SA-2," dated September 15, 1942, in "As Built" drawing envelope number ?, Building 2111, Fort McCoy; Record Drawing version of Plan No. 800-460, "Recreation Building, Type RB-4 . . .," also dated September 15, 1942, in "As Built" envelope ?

15. See Construction Division, Office of the Quartermaster General, "Mobilization Buildings. 25'- 0" Wide Building Clear Span One Story. Architectural Typical Plan," Plan No. 800-100, May 3, 1941 (Vandyke master copy in 800 Series map files, "Meatlocker."

16. Record Drawing versions of standard Plans 800-661 and 800-460.

17. Record drawing version of standard Plan 800-460; Vandyke master copy of Standard War Department Plan 800-196, included in the attached Supplemental Material section.

18. Drawings and dimensions for all three standard types of windows are provided in Construction Division, Office of the Quartermaster General, "Mobilization Buildings. Standard Window Details. Types, Schedules & Details," Plan No. 800-151, May 3, 1941 (Vandyke master copy in 800 Series map files, "Meatlocker."

19. "Real Property Record . . . Building 801."

20. See Record copy versions of standard Plans 800-661 and 460 and Area Engineer Plan No. 6150-1-B.

21. See record drawing versions of standard Plans 800-460 and 661; Vandyke master copy of standard Plan No. 800-100.

22. Record drawing version of standard Plans 800-460 and 800-661.

23. The information on original functions is derived from Area Engineer Plan No. 6150-4-GL, the block layout plan for Blocks 7, 8, and 9. A copy is in the Supplemental Materials section.

24. No copy of 800-100 could be found in any of the records of the Directorate of Engineering at Fort McCoy.

25. An article providing a biographical sketch of Hayden appeared in the *Real McCoy*, the camp newspaper, in the fall of 1942: "The 'Daddy' of Camp McCoy to New Fields," November ?, 1942, p. 8, c. 1. A similar article about Lamoreaux appeared in a local newspaper, probably the *Real McCoy* after World War II. An undated clipping of the latter, entitled "?" was found in the Public Affairs Office archive, Fort McCoy. Also see James A. Glass, "History of the Planning and Construction of Camp McCoy, 1940 to 1946" (Washington, D. C.: Historic American Buildings Survey, 1988), pp. ?

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-801 HABS NO. WI-308-B
(STOREHOUSE, ADMINISTRATION AND RECREATION BUILDING)
[Camp McCoy, Building T-801]
[Storehouse, Administration and Recreation Building]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-B-1 PERSPECTIVE VIEW OF SOUTH (FRONT) AND EAST SIDE

WI-308-B-2 PERSPECTIVE VIEW OF SOUTH (FRONT) AND WEST SIDE

WI-308-B-3 SOUTH (FRONT) ELEVATION

WI-308-B-4 PERSPECTIVE VIEW OF WEST SIDE

WI-308-B-5 DETAILED VIEW OF FRONT STAIR, ENTRANCE

WI-308-B-6 INTERIOR VIEW OF STOREROOM SHOWING ROOF TRUSSES AND NORTH WALL STAIRS INTO OFFICE AREA

WI-308-B-7 INTERIOR VIEW OF STOREROOM SHOWING EXPOSED WALL STRUCTURE AND SLIDING DOOR ON WEST WALL

WI-308-B-8 DETAILED INTERIOR VIEW OF ROOF TRUSSES

WI-308-B-9 INTERIOR VIEW OF SOUTH OFFICE LOOKING NORTH FROM STOREROOM

WI-308-B-10 INTERIOR VIEW OF SOUTH OFFICE LOOKING SOUTH INTO STOREROOM

WI-308-B-11 INTERIOR VIEW OF NORTH OFFICE ROOM FROM DOORWAY TO SOUTH OFFICE ROOM

BUILDING T-635

MESS HALL

Figure 65. Perspective view of west (front) and south side.

Figure 66. View of kitchen looking east toward dining room.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-635 (MESS HALL)
[Camp mcCoy, Building T-635 (Mess Hall)]
HABS NO. WI-308-C

Location: Approximately 200' northeast of East 12 Avenue and 210 feet northwest of East N Street, in Block 6 of the cantonment plan of the main post at Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

Present Owner: Department of the Army

Original Use: Mess hall for 152 men.

Present Use: Now vacant.

Significance: Building T-635 is of interest historically as a nearly unaltered example of a mess hall at Camp McCoy. One of 172 such buildings erected at the cantonment, the 635 hall illustrates the setting in which enlisted men ate their meals and food was prepared, served, and stored.

Architecturally, Building T-635 depicts one of five variations available in the 800 Series of standard plans for mess halls. The designs could be expanded or contracted depending on the size of the units using the halls.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Standard War Department drawings prepared for the construction of 152-Man mess halls such as Building T-635 are dated January 5, 1942. Construction of Building T-635 began probably in the late summer of 1942 and was completed on November 27.[2]

2. Architect: George E. Bergstrom, Chief of the Architectural Unit in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 1941 revision of the 700 Series of standard drawings that produced the 800 Series of plans. Bergstrom's draftsmen re-worked Plan 700-1127 and emerged with standard Plan 800-849 for a 172-man mess hall in May 1941. After the Corps of Engineers assumed responsibility for cantonment construction in December 1941, a new revision of the mess hall drawings was ordered by Col. James H. Strattan, Chief of the Corps Engineering Branch. Plans 800-805, 806, and 807 were prepared by draftsman W. M. Smith, under the supervision of the head of the Architectural Unit, W. J. New. When a few more 152-man mess halls

were needed at Camp McCoy in the summer of 1942, the January plans were used to construct the additional halls.[3]

At Camp McCoy, Area Engineer Everett C. Hayden approved the minor changes that were made in the standard drawings before construction began.[4]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[5] The owner from 1942 to 1947 was the War Department. Since 1947, the U. S. Department of the Army, the successor to the War Department, has held title.

4. Builder, contractor, suppliers: Building 1129 was part of construction area F, which was built by the St. Paul, Minnesota, firm of Madsen, Schumacher, Watson and Associates. Bids for construction of the cantonment were advertised in February 1942 and contracts were awarded in late March. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building T-635 and the rest of the cantonment at auctions held in the Upper Midwest region during the spring of 1942. Other materials used in construction--concrete, cement-asbestos siding, wall board, furnace and ductwork, plumbing and electrical fixtures, etc.--were apparently provided by subcontractors from the Wisconsin area.[6]

5. Original plans and construction: The interior and exterior of Building 801 have been changed very little. Record copies of the three basic standard War Department drawings used to construct the four 152-Man mess halls of the Building T-635 plan type have been preserved by the Directorate of Engineering at Fort McCoy and are currently kept in "As Built" envelope 72 in Building 2111. The original Vandyke master copies of the three basic plans and ten of the twelve general standard plans[7] used to construct all cantonment mess halls are kept in the 800 Series map files of the "Meatlocker" storage room in Building 2145. Some of the Vandyke plans are also record drawings.

None of the construction photographs taken by the Army Signal Corps of mess halls at Camp McCoy could be found at Fort McCoy. Views of the completed exterior and interior of a sample hall were reproduced in the Sparta newspapers in August 1942.

The original cost of construction for Building T-635 was $15,034.[8]

6. Alterations and additions: On the exterior, the grayish-white cement asbestos siding has been replaced in a few spots on all elevations with either white or gray-striped cement pieces of the same size as the originals. A post-war aluminum shaft for ventilation, possibly for a new hot water heater, has been installed on the lower southeast slope of the kitchen roof. Also, the original door at the southwest

FORT McCOY, BUILDING T-635 (MESS HALL)
[Camp McCoy, Building T-635 (Mess Hall)]
HABS NO. WI-308-C (page 3)

appears to have been replaced since World War II, and the entry lights that initially hung from the two gables of the building have been removed.

Inside, linoleum tiles with a green and cream pattern were laid over the original softwood floor of the dining room in 1958.[9] When field notes and photographs were taken in September 1988, the 1942 sinks, preparation table, and plumbing were in a dismantled condition and appeared ready to be removed from the building.

B. Historical Context:

The construction of Building T-635 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as Building T-635, the 1939 housing capacity of 200,00 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units, and assembly-line approach to construction were largely developed in the construction of these mobilization cantonments.

Building T-635 was one of 172 mess halls erected in the troop housing area of "New" Camp McCoy, one of approximately fifteen mobilization cantonments built by the War Department between the entrance of the United States in World War II late in 1941 and early 1943. The 1941-43 cantonments were constructed to house and serve as bases for training approximately 525,000 men drafted for Army service after the declaration of war.[10]

Two newly organized Army divisions occupied Camp McCoy during their training. The Second Army Division arrived at the cantonment soon after completion of construction, in the fall of 1942, and remained for a year, until November 1943, leaving for action in the Italian campaign. The 76th Division then took over the camp for a year, departing for service in the liberation of Western Europe in December 1944. In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year, the personnel center assumed the role of discharging veterans as the war came to a close. The personnel center closed in May 1946, and most other functions at the camp halted a year later.[11]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of regular, reserve, and National Guard units in the Fifth Army area for service in the Korean War. A reassignment and separation center was also opened at the camp during the conflict. Since 1953, the camp has become a center for training reserve units of the Army and National Guard regiments of the Midwest region.[12]

FORT McCOY, BUILDING T-635 (MESS HALL)
[Camp McCoy, Building T-635 (Mess Hall)]
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When fully occupied during World War II, the cantonment area of Camp McCoy housed approximately 35,000 people. The camp was laid out in twenty-eight blocks, twenty of which housed troops and officers. Each block was occupied by six to ten companies. Block 6 contained nine companies, each of which lived in two to three, 74-man barracks and occupied one company storehouse, administration, and recreation building. Building T-635 was one of eight mess halls constructed in Block 6 and may have served a single, 152-man company. Four larger mess halls at the center of N Street (Plan No. 6150-3-GL) served 228 men each.

The interior of Building 635 depicts the activities carried on in all 172 mess halls at Camp McCoy: a dining room in one half, in which the troops sat at tables, and a kitchen and store room in the other half, where food was prepared, served, and stored.

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural character: The design of Building T-635 illustrates the flexibility of standard plans in meeting the needs of the Army units assigned to the mobilization cantonments. The 1941 mess hall drawings and the January 1942 revised drawings both set forth a basic plan that could be expanded or contracted to fit the numbers of men in the units that used each hall. Five sub-types of the mess-hall plans were used at Camp McCoy: 228-man, 172-man, 152-man, and 112-man. The floor plans could be adjusted to meet the capacity desired by eliminating or adding bays.[13]

   Most of the 120 mess halls erected at Camp McCoy were of the largest type, accommodating 228 men. Only Building T-635 and three others were constructed using the January 1942 version of the 152-man plan.[14] Nevertheless, differences between the five versions are minor, the T-635 hall is significant as one of the least altered of any of the mess buildings.

2. Condition of fabric: The general condition of Building T-635 is good. Minor deterioration is obvious in several areas of the exterior. A few pieces of original siding have fallen off on the southwest and southeast walls, and paint is peeling on the foundation skirting, window and door surrounds and frames and along the eaves. On the southeast side, the fascia boards are badly weathered.In the interior, paint is peeling in the kitchen, on the walls and ceiling. Otherwise, no serious deterioration is noticeable.

B. Description of the Exterior:

1. Over-all dimensions: Building T-635 is rectangular in shape and is 25'-0" wide and 100'-0" long. The building is one story, and the height from grade to the roof ridge is approximately 15'.

FORT McCOY, BUILDING T-635 (MESS HALL)
[Camp McCOY, Building T-635 (Mess Hall)
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There are ten bays (windows and doorways) at the northwest side and eight at the southeast wall; in the southwest end are two bays, and in the northeast, three. There are five bays corresponding to the dining room in the two long elevations, while the kitchen is lit by four bays on the northwest side, where a "scullery sink" stood, and by two bays on the opposite side, where the kitchen range was located. Symmetry was not a concern in the design, which was governed by the requirements of the interior plan.

2. Foundations: The foundation of Building T-635, and the three other 152-man mess halls constructed in the fall of 1942, consists of four longitudinal rows of poured concrete piers, each 1'-0" square, resting on 2'-0" x 1'-0" footings sunk 2'-0". The piers support longitudinal wooden girders, each measuring 6" x 10". The piers are spaced apart 10'-0" on center. There is no cellar excavation.

   The crawl space below the mess hall is screened by wooden skirting composed vertical boards measuring 2'-0" x 7-1/2". Each board is affixed to the foundation girders and sills inserted into slots in the exterior piers. There are four rectangular access openings in the skirting on the northwest wall, three on the southeast wall, and two on the northeast.

3. Walls: The exterior walls of Building T-635 consist of three layers: (a) wooden sheathing,[15] (b) black construction paper, which acts as a vapor barrier, and (c) siding composed of cement asbestos pieces measuring 11" x 24", the standard size used throughout the cantonment.[16]

4. Structural system, framing: Building T-635 and the other one-story buildings erected from the 800 Series standard plans are of balloon construction. The frame of the exterior walls rests on 8" x 10" wooden girders, each composed of four 2" x 10" boards. The girders are supported by the exterior concrete piers. The joists of the mess hall floor are borne by the two interior longitudinal girders and rows of piers.

   The exterior wall structure is composed of four corner posts and 2" x 4" studs placed 2'-0" apart on center. Girts of the same size stabilize the studs horizontally. The studs support the plates in all four elevations, and the plates in turn bear the joists and rafters of the roof structure. Eight diagonal braces running between the foundation girder and the roof plate reinforce the exterior walls.

   The joist structure of Building T-635 varies below each of the three rooms in the mess hall. Beneath the dining room, with its softwood floor, 6" x 10" longitudinal girders composed of three boards support 2" x 10" joists, spaced 2'-0" on center. Double joists bear the two concrete stove platforms and the partition wall between the dining room and kitchen. Below the kitchen, with its concrete floor, are 8" x 10" girders bearing joists that are spaced 1'-0" on center. Girders measuring

10" x 10" support the concrete storeroom floor, on which rests a heavy cooler and refrigerator.

There are no posts above the two rows of interior girders, the roof trusses being clear-span. The interior partitions between the dining room and kitchen and between the kitchen and storeroom contain the stud and girt structure of the exterior walls and are load-bearing, supported by double joists. Bridging boards measuring 3" x 10" run longitudinally between the joists for extra reinforcement.

The roof structure is identical to that used in other one-story buildings in the 800 Series, such as the company storehouse and recreation buildings. The rafters are each supported by a modified king-post truss, consisting of a standard size, a central board functioning as a king-post, a tie-beam running between the east and west plates, and braces running between the tie-beam and rafters. Along the longitudinal axis, diagonal braces reinforce the king-posts and a north-south horizontal beam running between the tie-beams. Knee braces running from the walls below the attic to the roof rafters afford additional support. There are no purlins.[17]

5. Porches, stoops: The record drawing versions of standard Plans 800-805 and 806 show wooden stairs and porches at each of the four entries on the exterior of the five types of mess halls.[18] Nevertheless, at Building T-635 and at every other building with exterior stairways in the cantonment area, there are instead poured concrete stoops with cast-iron rails. It seems likely, given the universal presence of the concrete stoop on all building types, that the more permanent (and less scarce) material was substituted for wood by the Area Engineer, Lt. Col. E. C. Hayden.

The concrete stoops for each entry are wider than those for the 74-man barracks and the company storehouse-administration-and-recreation buildings, reflecting the greater width of the doors in the mess hall.[19] The iron rails are painted black and are joined with aluminum fittings. A whole rail is missing from the northeast stoop, as are the rails on the stairs of the southwest stoop.

6. Chimneys: There were no heater rooms or coal furnaces in the 800 Series mess halls erected at Camp McCoy; hence no brick chimney, as in most other building types of the series.

There is a row of three sheet-metal exhaust chimneys rising from the hood above the range in the kitchen through the southeast slope of the roof. Each chimney is cylindrical and terminates in "rain hoods," inverted conical pieces. Horizontal metal sheets encircle the chimney pipe immediately below the rain hood. The weathered character of the metal suggests that the range chimneys are original, although the record version of Plan 800-806 depicts the narrower type of pipe and hood used elsewhere in the building for the Cannon stoves.

FORT McCOY, BUILDING T-635 (MESS HALL)
[Camp McCoy, Building T-635 (Mess Hall)]
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Above the two platforms in the dining room where Cannon stoves originally stood are open pipes leading through the roof within a four-sided metal casing nailed to the roof. The cylindrical pipes re-emerge above the casing and terminate with a "rain hood" of the same type as the range chimneys.[20]

The rectangular aluminum exhaust chimney above the hot-water heater in the kitchen appears to be of post-war construction.

7. Openings:

a. Doorways and doors: As already stated, the four doors of the exterior are wider than those in several other 800 Series building types at Fort McCoy. Two sizes of doors are found at Building T-635. Standard door type "BBB," measuring 7'-0" x 3'-0", was installed in the entry to the storeroom, southwest wall.[21] Standard door type "P," measuring 8'-0" x 3'-2" was used in the three doorways leading into the dining room.[22]

The door designs were all of the standard type used at Camp McCoy: four lights over three horizontal recessed panels. The standard simple doorway surround was used for all entries. Standard screen doors, composed of wooden frames and wire mesh screens, appear on the outside of the southeast entry and on the inside of the northeast and northwest doorways.

b. Windows: There are two types of standard 800 window designs in Building T-635. Type "A," measuring 4'-6" x 3'-4-5/16", appears along the southwest section of the building, containing the kitchen and storeroom. Type "B," measuring 5'-2" x 3'-4-5/16", appears along the dining room section of the hall. The kitchen and storeroom windows are set higher in the walls and are shorter, possibly to allow for the heights of the scullery sink and kitchen appliances.[23]

Both types of windows follow the same standard design: eight-over-eight-light, double-hung sash, and constructed of wood, with the simple wooden architrave. The original wood-frame screens survive for all the windows of Building T-635.

8. Roof:

a. Shape, covering: The roof of Building T-635 is low-pitched gable, running along a southwest-northeast axis. The roof is covered with red asphalt shingles consisting of the original layer of 1942 and a second layer applied in 1965.[24]

b. Cornice, eaves: The boards composing the fascia are of the same size as used in the company storehouse and recreation buildings: approximately 14' long, 9" wide, and 7/8" thick. The soffit boards, of the same dimensions, are laid across the lower edges of the rafters, flush with the roof plane.

C. Description of the Interior:

1. Floor plans:

a. Basement: There is no basement under Building T-635. The crawl space below the main floor is at grade.

b. Main floor: There are three rooms in Building T-635: the dining room, kitchen, and storeroom. Entering the building through the southwest door, the first room is the storeroom, measuring 18'-0" x 25'-0".[25] Next is the kitchen, approximately 30' x 25'. Together, the storeroom and kitchen comprise the southwest half of building T-635. The principal room of the hall, occupying the northeast half, is the 52'-0" x 25'-0" dining room, the "mess hall" proper in the standard plans.

During World War II, the 152 enlisted men assigned to Building T-635 entered the dining room through the exterior doorways to the northwest, northeast, and southeast. They received their food at a serving counter between the mess section and the kitchen and ate at standard issue tables placed in rows parallel to the northeast side of the room. Through an opening in the counter was the kitchen, where the cooks and "K. P." staff prepared the food and cleaned up following each meal. They stored foodstuffs on shelves in the storeroom and placed perishable items in a large cooler in the southwest room. The kitchen staff entered and exited the mess hall through the rear, southwest doorway.

c. Attic: There is a half-story attic above the main floor, containing roof structure trusses.

2. Stairways: There are no interior stairways.

3. Flooring: Originally, there were softwood floors in the dining rooms of all the mess halls erected at Camp McCoy, laid on foundations of construction paper and wooden sub-flooring. Following World War II, linoleum tile was installed in apparently all the dining rooms in the cantonment. At Building T-635, linoleum squares measuring 9" x 9" and colored green with cream streaking were laid over the softwood floor in 1958.[26]

FORT McCOY, BUILDING T-635 (MESS HALL)
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There are two 5'-0" x 4'-6" concrete platforms in the mess section of Building T-635, intended as stands for the Cannon stoves that originally heated the room. One is located near the east corner of the dining area; the other near the northwest entrance.

In the kitchen and storeroom is a 3" thick concrete floor, laid on the same paper and sub-flooring as in the dining room and reinforced with wire mesh. Beneath the site of the cooking ranges on the southeast side of the kitchen is an additional 1-1/2" high concrete platform.[27]

4. Wall and ceiling finishes:

a. Dining room: In the dining room, there is a wainscoting of manufactured board, called "tempered pressed wood" in the standard plans. The 3'-8" high wainscoting is located above a 4-3/4" wooden baseboard. The pressed wood is laid over a fiber board, known initially as "insulation board," which continues approximately 6' above the wainscoting to the cornice of the room, composed of three over-lapping boards. The ceiling is composed also of insulation board. Pairs of exposed knee braces run between the upper walls into the attic between each bay.[28]

b. Kitchen: In the kitchen, there is a 6'-0" high wainscoting composed of pressed wood. As in the dining room, the wainscoting is laid over insulation board, which continues up to three cornice boards. The ceiling is also composed of insulation board. At the center of the southeast wall of the kitchen, providing a fireproof backing for the cooking ranges, is a 14-1/2' wide ceramic tile surface. The tiles are 2" thick and anchored to the exterior wall studs and corrugated metal ties.[29]

c. Storeroom: The storeroom walls are composed of standard-sized, 5-1/4" wide tongue and groove boards, nailed horizontally across the studs. On three of the walls are built-in shelves and counters, constructed of a mixture of 3-1/4" and 5-1/4" tongue and groove boards. The ceiling of the storeroom is composed of insulation board.

d. Interior painting: Originally, none of the interior walls of the Camp McCoy mess halls were painted. After World War II paint was applied gradually to all the halls.

The interior of Building T-635 was painted in April 1951. The wainscoting of the dining room was painted an aqua green color, and the upper walls and ceiling yellow. The kitchen wainscoting received a dark green color, while the upper walls and ceiling became aqua green. The storeroom walls and ceiling are both green.

5. Openings:

a. Doorways and doors: There is one interior door in Building T-635, located between the kitchen and the storeroom. The door is standard type "L-I," consisting of five horizontal recessed panels and measuring 3'-0" x 6'-8".[30]

b. Windows: The same, simple board architraves found in the barracks and company storehouse, administration, and recreation buildings enframe the interiors of mess hall windows, as illustrated in Building T-635.

6. Hardware: The original galvanized metal knobs and rim locks survive on two of the exterior doors to the dining room of the T-635 building. In the southeast entry door, a rectangular door plate and dead bolt lock appear to be postwar in age. The brass-plated hardware in the southwest entry door, like the door itself, is a recent replacement. The original hardware is found on the single interior door. The spring metal restraints on all of the double-hung windows also remain.

7. Mechanical Equipment:

a. Heating: In the dining room, the two Cannon, coal-fired stoves that provided heat originally have been removed. There were no stoves in the kitchen or storeroom; apparently the heat from the ranges and the hot water heater and tank were sufficient to keep the staff warm.

In the kitchen the original coal-fired hot-water heater was removed after World War II and replaced with a gas-powered, "A. O. Smith Commercial Water Heater," manufactured by Burkay. The hot-water tank installed in 1942 remains, standing in the south corner of the kitchen, covered with asbestos wrapping and painted aqua green. Both heater and tank have been disconnected.

There is no central heating system in Building T-635, or furnace room.

b. Kitchen and storeroom appliances: The three coal-fired cooking ranges of 1942 have been removed. A single range fired by natural gas currently occupies one end of the range platform, against the southeast wall of the kitchen. The metal hood over the ranges may also be a replacement. Initially, exhaust fumes were sucked up through three holes in the 1942 hood by a fan located in the attic and thrust out the three exhaust chimneys still standing on the roof.[31]

In the storeroom are two refrigerating appliances. The original device is a wooden cooler of standard type KE-25-18, measuring 6'-0" square and fastened against the northeast wall, next to the door from the kitchen. The U. S. Government supplied the cooler to the general contractors, who

installed it. The cooler operates on a 1/2 horse power motor.[32] Near the southeast wall of the storeroom is a portable refrigerator, dating from ca 1940s, which probably was moved into the building after World War II.

c. Ventilation: In the ceiling of the dining room are two rows of four standard vents, each screened. Hot air rises from the room, escapes through the vents to the attic, and thence through two wooden ventilators straddling the roof ridge. The ventilators resemble small cupolas, with pyramidal, shingled roofs and square bases. The air exits through louvered panels on the four sides. Similarly, rectangular ventilation panels in the gables of the two end walls of the hall allow the escape of hot air.[33]

d. Lighting: The original metal-shade light fixtures of the dining room survive, screwed onto porcelain sockets attached to the ceiling. In the kitchen two of the same type shade survive near the cooking range; the other light fixtures in the room have been removed. In the storeroom, the porcelain lighting socket on the southeast side remains; the other fixture has been taken out.[34]

e. Plumbing: The cast-iron plumbing of the kitchen has been dismantled, beneath the former locations of the two scullery sinks and around hot-water heater and tank.

8. Original furnishings: The wooden tables and benches of the dining room have been removed. Some of the kitchen equipment-furniture remains, all of it of standard government issue. An 8'-0" x 3'-0" "work" (preparation) table, "KE-16," stands at the center of the room. Incorporated in the partition wall between the dining room and kitchen is the serving counter, constructed of standard-sized studs and covered with a pressed board top. The counter is 2'-6" wide and 3'-4" tall. Beneath the top on one side are wooden shelves for holding serving dishes; on the other is a compartment covered with sheet metal.

Also in the kitchen are two detached "scullery sinks," Type KE-14 and KE-15-4, made of galvanized steel and both consisting of double sinks and side counters. The original locations of the sinks, where pots, pans, and dishes were washed, are outlined on the southwest and northwest walls by unpainted sections of wainscoting.[35]

In the north corner of the dining room is a 6'-0" high wooden pie safe, which is not shown on any of the record drawings for Building T-635. The safe may easily pre-date World War II, and the date of its placement in this mess hall is unknown.

FORT McCOY, BUILDING T-635 (MESS HALL)
[Camp McCoy, Building T-635 (Mess Hall)
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D. Site:

1. General setting and orientation: Building T-635 and the street layout and other buildings of Block 6 are arranged in a gridiron pattern running on a southwest to northeast axis.[36] The longitudinal elevations of T-635 run parallel to East N Street, some 200' to the southeast; the transverse, or end, elevations run parallel to East 12th Avenue, approximately 210' to the southwest. The site of Building T-635 is relatively level.

About 130' to the east of T-635 is a group of four 228-man mess halls, located on either side of N Street. Approximately the same distance to the south is the first of three 74-man barracks located on the northwest side of N Street. It is unclear whether Building T-635, which was built after the other mess halls in Block 6, to accommodate additional men, served a single unit, such as a platoon from one of the three barracks, or merely the "over-flow" from the four main mess halls at the center of N Street.

Between the T-635 mess hall and 12th Avenue are two company storehouse-administration-and-recreation buildings, one of the SA-2/RB-4 type and the other of the smaller, SA-2/RB-2 version. Adjacent to the south corner of Building T-635 is a badly deteriorated concrete coal pad and along the southwest is a reinforced concrete loading platform, at grade.

2. Historic landscape design: In 1942 a system of graded walks were laid out on all four sides of Building T-635. A perimeter walk can still be discerned running parallel to the northwest and northeast elevations, about 25' from the building. The perimeter path to the northeast continues to the southeast and intersects with a walk that runs behind the barracks and 228-man mess halls on the southwest side of N Street. Secondary walks lead from the three entries to the dining room in T-635 to the perimeter walk and the main path to the southeast. All the walks originally were composed of bituminous asphalt and gravel; little of either material remains today.

A dirt and gravel drive leads from Building T-635 to 12th Avenue.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: The following Standard War Department drawings were devised for use in constructing Building T-635 and the other three 152-man mess halls erected at Camp McCoy in the fall of 1942: 800-805, 800-806, and 800-807. These drawings are all dated January 5, 1942. In addition, the following general standard drawings in the 800 Series were used: 800-100, 800-101, 800-156,[37] 800-174, 800-175, 800-176, 800-176, 800-177, 800-186, 800-187, 800-190, 800-194, and 800-199 (see Bibliography for full citation of each drawing). The general plans range in date from May 1941 to April 1942.

FORT McCOY, BUILDING T-635 (MESS HALL)
[Camp McCoy, Building T-625 (Mess Hall)]
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Under Lt. Col. E. C. Hayden, the Area Engineer who supervised construction of Camp McCoy, hundreds of detailed plans were prepared locally to guide the construction of roads, sewerage, utilities, and preparation of the building sites. These Area Engineer drawings were given 6150 Series numbers and included such plans as that of May 13, 1942, depicting the construction areas and names of contractors (cited above). The 6150 plans are stored in the north map file of the "Meatlocker" storage room, Building 2145, and in several map files of Building 2111.

In September 1942, Hayden directed that record copies be made of the standard drawings and supplemental plans used to build the buildings at Camp McCoy. Notations of deviations from the original designs and specifications were indicated in red on the record versions, which after World War II were retained in an "As Built" file by the Post Engineer. Notations of changes were also made on some of the Vandyke master copies of the standard drawings and the words "RECORD DRAWING OF WORK AS BUILT" were stamped above the legends.

In November 1942, Hayden's successor as Area Engineer, Major Fred L. Starbuck, ordered the preparation of record drawings depicting the finished layout of each block in the cantonment plan. The plan pertaining to Block 6, No. 6150-3-GL, is stored with other November drawings in Drawer 15 of the "Meatlocker."

Field notes were made prior to writing the present report, as a check on the information contained in the 1941-42 plans. The principal deviation noticed from the drawings was in the substitution of poured concrete stoops for wooden entry porches, which was also done with all other mobilization buildings erected at Camp McCoy.

High-quality, photographic negatives and prints of the above drawings accompany this report. The original Vandyke master copies and blueline prints are located in the 800 Series map files in the "Meatlocker" storage room, Building 2145, Fort McCoy. The record drawings prepared for the Post Engineer are found in portfolios kept in the "As Built" files of the Directorate of Engineering, Building 2111.

B. Early Views: No construction photographs of Building T-635 could be found in the records of the Directorate of Engineering at Fort McCoy. As already noted, a few such photos of the exterior and interior of a typical mess hall were published in area newspapers in 1942.

C. Bibliography:

1. Primary and unpublished sources:

a. Standard War Department Drawings

i. War Department. Chief of the Office of Engineers. "Mobilization Buildings. Mess Halls. Type M-112, 152, 172, 228, & 248. Plans & Schedules," Plan No. 800-805, January 5, 1942.

ii. _____. _____. "Mobilization Buildings. Mess Halls. Type M-112, 152, 172, 228 & 248. Elevations, Sections & Detail of Kitchen," Plan 800-806, January 5, 1942.

iii. _____. _____. "Mobilization Buildings. Mess Halls. Type M-112, 152, 172, 228 & 248. Heating, Plumbing & Electrical," Plan No. 800-807, January 5, 1942.

iv. _____. _____. "Mobilization Buildings. 25'-0" Wide Building Clear Span One Story. Architectural Typical Plan, Elevations, & Sections," Plan No. 800-100, May 3, 1941.

v. [Standard War Department Plan No. 800-101, "25'-0" Wide Building Clear Span One Story. Structural." No copy could be found at Fort McCoy]

vi. [Standard War Department Plan No.800-156, "Misc. Details," No copy could be found at Fort McCoy]

vii. Construction Division. Office of the Quartermaster General. "Mobilization Buildings. Miscellaneous Details. Mess Hall," Plan No. 800-174, August 9, 1941.

viii. _____. _____. "Mobilization Buildings. Miscellaneous Details. Mess Hall," Plan No. 800-175, August 9, 1941.

ix. _____. _____. "Mobilization Buildings. Miscellaneous Details. Mess Hall," Plan No. 800-176, August 9, 1941.

x. _____. _____. "Mobilization Buildings. Miscellaneous Details. Mess Hall," Plan No. 800-177, August 9, 1941.

xi. War Department. Office of the Chief of Engineers - Construction Division. Washington, D. C. "Mobilization Buildings. Miscellaneous Details. Interior & Exterior Details," Drawing No. 800-186, April 28, 1942.

xii. _____. _____. _____. "Mobilization Buildings. Miscellaneous Details. Interior & Exterior Details, "Drawing No. 800-187, April 29, 1942.

FORT McCOY, BUILDING T-635 (MESS HALL)
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xiii. Construction Division. Office of the Quartermaster General. "Mobilization Buildings. Standard Details. Smoke Pipe & Flue Details," Plan No. 800-190, May 12, 1941.

xiv. _____. _____. "Mobilization Buildings. Standard Plumbing Details," Plan No. 800-194, May 12, 1941.

xv. _____. _____. "Mobilization Building. Standard Electrical Details," Plan No. 800-199, May 12, 1941.

b. Drawings Produced at Camp McCoy

i. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan [with boundaries of seven construction areas and names of contractors drawn in], Plan No. 6150-1-L, May 23, 1942 [original blueline print on north map file, "Meatlocker" storage room, Building 2145]

ii. _____. "Camp McCoy Project. Block Layout Plan Showing Buildings, Roads, Parking Areas, Service Drives, Walks & Coal Pads. Blk. 5 and 6," Plan No. 6150-3-GL, November 24, 1942 (revised to April 4, 1944) [original linen drawing in Drawer 15, map file, "Meatlocker"]

c. Record Drawing versions of standard plans (in "As Built" Envelope 72, Building 2111)

Standard Plans 800-805, 800-806, and 800-807, labeled "M-152--Additional Bldg's. in Areas E & F." Notations in red are dated November 18, 1942.

d. Other original records at Fort McCoy

"Real Property Record. Building and Structures. Building T-635," July 13,1943. In card file, "Meatlocker."

2. Secondary and published sources:

a. Books and manuscripts:

Fine, Lenore and Jesse A. Remington. *The Corps of Engineers: Construction in the United States* [volume in the series, *United States Army in World War II: The Technical Service*]. Washington, D. C.: Office of the Chief of Military History, United States Army, 1972.

Post Engineer Office, Camp McCoy, Wisconsin. "Historical Data" [typescript copy of original ditto version], January 15, 1946.[38]

Wasch, Diane and Perry Bush. "The Historical Context of World War Mobilization Construction" Unpublished paper. Washington, D.C.: Historic American Buildings Survey, National Park Service, 1988.

b. Newspaper articles (in chronological order):

"To Condemn 9600 Acres for McCoy; Petition to Be Filed Monday," *Sparta Herald*, February 9, 1942, p. 1.

"Bids on McCoy Work Started February 14," *Sparta Herald*, February 16, 1942, p. 1.

"Work Started on McCoy Building," *Monroe County Democrat*, February 19, 1942, p. 1.

"Work at McCoy Scheduled to Start About March 20; Bids to Close March 7th," *Monroe County Democrat*, February 26, 1942, p. 1.

"Closing Date for McCoy Bids Nears," *Sparta Herald*, March 16, 1942, p. 1.

"More Contracts Being Let at McCoy Cantonment, "*Monroe County Democrat*, March 26, 1942, p. 1.

"More Wisconsin Concerns Get Contracts At McCoy," *Monroe County Democrat*, April 2, 1942, p. 1.

"Construction at Camp McCoy Getting Along; The Place Is Seething with Activity," *Monroe County Democrat*, April 16, 1942, p. 1.

"Government Buys Lumber for Army Cantonment," *Monroe County Democrat*, April 23, 1942, p. 1.

"Where Soldiers Will Live at New McCoy," *Sparta Herald*, August 31, 1942, p. 1.

D. Likely Sources Not Yet Investigated:

1. Documentary: Information on the Madsen, Schumacher, Watson, and Associates contracting firm is probably available in St. Paul, Minnesota, research libraries. In addition, more information may be available in the National Archives and other

archives in the Washington, D. C. area, regarding George E. Bergstrom and the other designers who produced the 800-Series of standard drawings.

2. Oral History: Interviews could be conducted with several people locally who worked on the construction of Camp McCoy. In particular, a Mr. Schroeder of the Schroeder contracting firm of Sparta worked for one of the contractors during 1942. Also, it would be worthwhile to attempt to locate Everett C. Hayden, the Area Engineer who supervised the construction of Camp McCoy or his assistant, David C. Lamoreaux. Both men would probably be in their early eighties, if still living, and both reached the rank of at least Lieutenant Colonel in the Corps of Engineers.[39]

E. Supplemental Material:

1. Historical Photographs: A photocopy is included of Signal Corps construction photographs of the interior and exterior of a typical mess hall that appeared in the *Sparta Herald* at the end of August 1942.

2. Original drawings and plans: Photographic negatives and prints or high-contrast blueline prints of all plans listed in the Bibliography.

Prepared by: James A. Glass, Ph.D.
Field Supervisor
Fort McCoy Project
September 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champagne, Illinois. Large-format photography was done by Martin Stupich.

FORT McCOY, BUILDING T-635 (MESS HALL)
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NOTES:

1. See Office of the Area Engineer, Camp McCoy, Wisconsin, "Camp McCoy Project. Block Layout Plan - Showing - Service Drives, Walks, Coal Pads, Buildings, Roads, & Parking Areas. Blk. 5 and 6," Plan No. 6150-3-GL, November 24, 1942 (revised to April 4, 1944).

2. Office of the Chief of Engineers, War Department, "Mobilization Buildings. Mess Halls. Type - M-112, 152, 172, 228 & 248. Plans & Schedules," Plan No. 800-805, January 5, 1942 (record drawing version, filed in "As Built" envelope 72, Building 2111, Fort McCoy); "Real Property Record. Buildings and Structures--Post Building No. 635," card in card file drawers, "Meatlocker" storage room, Building 2145, Fort McCoy.

3. See notation in the border of the record drawing version of Plan 800-805, "As Built" envelope 72. The bulk of the 172 mess halls built in the triangular plan area were built using Plans 800-847, 849, or 851, all prepared by Bergstrom's staff in the spring of 1941. See Post Engineer Office, Camp McCoy, "Historical Data" [typescript copy of ditto original], p. 10 (copy of both versions in box marked "Historical Engineering Records," in "Meatlocker."

4. See Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States.* [volume in the series, *United States Army in World War II: The Technical Services*] (Washington, D. C.: Office of the Chief of Military History, United States Army, 1972), pp. 347-51; 524, and Diane Wasch and Perry Busch, [draft history of temporary World War II Army buildings] (Washington, D. C.: Historic American Buildings Survey, National Park Service, 1988), pp. 42-46. See also standard Plan 800-805.

5. "To Condemn 9600 Acres For McCoy," *Sparta Herald*, February 9, 1942, p. 1, c. 8.

6. Office of the Area Engineer, Camp McCoy, Wisconsin, "Camp McCoy Project--General Layout Plan [with boundaries of seven construction areas and names of contractors drawn in], Plan No. 6150-1-L, May 23, 1942 (original blueline print on map file, "Meatlocker"); "Bids on McCoy Work Started February 14," *Sparta Herald*, February 16, 1942, p. 1, c. 8; "Work at McCoy Scheduled to Start About March 20," *Monroe County Democrat*, February 26, 1942, p. 1, c. 8; "Closing Date for McCoy Bids Nears," *Sparta Herald*, March 16, 1942, p. 1, c. 7; "More Contracts Let at McCoy Cantonment," *Monroe County Democrat*, March 26, 1942, p. 1, c. 8; "Construction at Camp McCoy Getting Along," *Monroe County Democrat*, April 16, 1942, p. 1, c. 8; and "Government Buys Lumber for Army Cantonment," *Monroe County Democrat*, April 23, 1942, p. 1, c. 3.

7. No copies of Standard Plans 800-101 and 800-156 could be found in the records of the Directorate of Engineering at Fort McCoy.

8. "Real Property Record . . . Building 635."

9. "Real Property Record . . . Building 635."

10. Wasch and Busch, pp. 42; 47.

11. Post Engineer Office, "Historical Data," typescript copy of original report, pp. 6-7; handwritten notations on ditto original report, p. 18.

12. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office (?), Fort McCoy, n. d., c. 1985, p. 6; Lou Ann Mittelstaedt, "McCoy's History, 1947-Present," *Triad*, 3, No. 11 (May 29, 1986), p. 5.

13. See standard Plan 800-805, section 4.

14. Post Engineer Office, p. 10.

15. The sheathing may be composed of 7 1/8-inch tongue and groove boards, as in Building 801, but none was exposed for observation.

16. See Construction Division, Office of the Quartermaster General, "Mobilization Buildings. 25'- 0" Wide Building Clear Span One Story. Architectural Typical Plan," Plan No. 800-100, May 3, 1941 (Vandyke master copy in 800 Series map files, "Meatlocker."

17. Record drawing versions of standard Plan 800-805 and of War Department. Office of the Chief of Engineers. "Mobilization Buildings. Mess Halls. Type M-112, 152, 172, 228 & 248. Elevations, Sections, & Detail of Kitchen," Plan No. 800-806, January 5, 1942.

18. See the photographic prints of the record drawing versions of standard Plans 800-805 (floor plans) and 800-806 (elevations), included in the supplemental material section of this report.

19. See the discussion of doorways and doors, below.

20. Vandyke master copies of Standard War Department Plans 800-189 and 800-196, prints of which are included in the Supplemental Materials Section of this report.

21. As noted in the "Alterations and Additions" section, the southwest door has been replaced.

22. See the illustrations of the types of doors used in 800 Series mess halls in Standard War Department Plan No. 800-175, a print of which is included in the Supplemental Material
Section.

23. See the illustrations of standard window types used in mess halls in Standard War Department Plan No. 800-174, a print of which is included in the Supplemental Material Section.

24. "Real Property Record . . . Building 635."

25. See Standard War Department Plan 800-805, reproduced in the Supplemental Material Section.

26. "Real Property Record . . . Building 635."

27. See Standard Plans 800-805 and 800-806.

28. See standard Plan 800-177, in Supplemental Materials Section.

29. See record drawing version of standard Plan 800-806.

30. See standard Plans 800-175 and 800-805.

31. See standard Plan 800-806.

32. Ibid.

33. Ibid.

FORT McCOY, BUILDING T-635 (MESS HALL)
[Camp McCoy, Building T-635 (Mess Hall)]
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34. See standard Plan 800-199.

35. See standard Plans 800-177 and 800-806.

36. Area Engineer Plan 6150-3-GL is reproduced in the Supplemental Material Section.

37. No copies of either Plan 800-101 or Plan 800-156 could be found in the records of the Directorate of Engineering at Fort McCoy.

38. The ditto original and typescript copy are in a box marked, "Historical Engineering Records," in the "Meatlocker," Building 2145.

39. An article providing a biographical sketch of Hayden appeared in the *Real McCoy*, the camp newspaper, in the fall of 1942: "The 'Daddy' of Camp McCoy to New Fields," November 1942, p. 8, c. 1. A similar article about Lamoreaux appeared in the *Real McCoy* or other local newspaper, probably during the 1950s. An undated clipping of the article, entitled "Officer Who Helped Build McCoy in '42 Recalls Post's Early Construction Days," was found in the Public Affairs Office archive, Fort McCoy. Also see James A. Glass, "History of the Planning and Construction of Camp McCoy, 1940 to 1946" (Washington, D. C.: Historic American Buildings Survey, 1988).

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-635 (MESS HALL) HABS NO. WI-308-C
[Camp McCoy, Building T-635 (Mess Hall)]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-C-1 PERSPECTIVE VIEW OF WEST (FRONT) AND NORTH SIDE

WI-308-C-2 PERSPECTIVE VIEW OF WEST (FRONT) AND SOUTH SIDE

WI-308-C-3 VIEW OF WEST (FRONT) ELEVATION

WI-308-C-4 VIEW OF NORTH SIDE ELEVATION

WI-308-C-5 DINING ROOM LOOKING WEST TOWARD KITCHEN AND SHOWING LINOLEUM FLOOR

WI-308-C-6 VIEW OF KITCHEN LOOKING EAST TOWARD DINING ROOM

WI-308-C-7 VIEW OF KITCHEN, SOUTH WALL

WI-308-C-8 VIEW OF STOREROOM, SOUTH WALL

BUILDING T-1551

THEATER

Figure 67. View of west (front) entrance.

Figure 68. View of auditorium looking west through projection hole at back of building.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D

Location: Building T-1551 is located approximately 100' West of South Headquarters Road, and 100' south of an unnamed road leading to the Base Main PX, in Block 15 of the cantonment of the Main Post of Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

USGS Quadrangle Alderwood Lake, Wisconsin; 7.5 minute series 1983 (photorevised from 1978) UTM Coordinates: Zone 15 (1927 North American Datum) 4876280 N 685480 E

Present Owner: Department of the Army

Original Use: Theater with Dressing Room - 1038 seat

Present Use: Unused

Significance: Building T-1551 is significant as a relatively unmodified representative of a base theater. It represents one of four, type TH-1038-S theaters constructed at Fort McCoy in 1942.[2] Of these, the remaining three have undergone major alterations.[3] The structure is scheduled for demolition.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1551 probably began in the summer of 1942. There is a minor discrepancy on the date of building completion. Notations on the "As Built" drawing 800-500 state that the building was completed by October 5, 1942,[4] however the Real Property Records note the building as completed on November 4, 1942.[5]

2. Architect: George E. Bergstrom, Chief of the Architectural Unit in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 1941 revision of the 700 series theatre plans that produced the 800-500 series drawings in April 1941.[6]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[7] The owner from 1942-47 was the War Department. Since 1947, the U.S. Department of the Army, the successor to the War Department, has held title.

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D (page 2)

4. Builder, contractor, suppliers: Building T-1551 was part of construction area B at Fort McCoy. Bids for the construction of the cantonment were let in February 1942 and contracts were awarded in late March. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building T-1551 and the rest of the cantonment in the spring of 1942. The remaining materials used in construction were apparently purchased by subcontractors in the Wisconsin area.[8]

5. Original Plans and Construction: Building T-1551 was built from 800 series plan number 800-500 and associated plan numbers 800-501, 800-502, 800-503, 800-504, 800-505, 800-506, 800-507, 800-508, 800-509, 800-510, 800-511, 800-512, 800-513, 800-514, 800-515, 800-145, 800-151, 800-157, 800-185, 800-186, 800-187, 800-190, and 800-199.[9] The original plans used to construct the four TH-1038-S theatres at the installation are currently on file in "As Built" envelope #88 in Building T-2111. The original cost of the building was $72,000.[10] The only noted alteration to the original building plan at the time of construction is the use of concrete walls with steel reinforcement in the boiler room (in lieu of concrete block) and the use of plan 800-515 (Alternative Plan Providing Toilet Facilities for Colored Audience).[11]

6. Alterations and additions: On the exterior, the grayish white cement asbestos siding has been replaced in a few spots at low elevations with white siding of similar size. The exterior of the structure was repainted in 1957/1958 and 1965. The lobby was repainted in 1951 and the men's latrine was repainted in 1955. The building was re-roofed with a rolled bituminous system at an unknown date. Two covered entrances and ramps measuring 7'-4" x 13'-0" were added to the east and west walls in 1944.[12]

B. Historical Context:

The construction of Building T-1551 was part of a massive, nation-wide mobilization program designed to build contonments in which to house and train the expanded World War II Army. The 800 series drawings, and the 700 series that preceded it, were a comprehensive set of drawings which could be used interchangably in creating the various building types. Through the construction of temporary wood frame buildings, such as T-1551, the 1939 housing capacity of 200,000 persons was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. In addition, the war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely pioneered in the construction of these mobilization structures.

Building T-1551 was one of four, TH-1038-S theatres constructed in the main cantonment area of the "New Camp McCoy", a mobilization cantonment built by

the War Department between the entrance of the United States into World War II late in 1941 and early 1943.[13] The 1941-1943 cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.[14] Two newly organized Army Divisions occupied Camp McCoy during their training. The Second Army Division arrived soon after the completion of construction in the fall of 1942 and remained until November 1943, leaving for action in the Italian Campaign. The 76th Division then took over, remaining until December 1944, when they departed for service in the Battle of the Bulge and the subsequent occupation of Germany. Troops for engineering, railhead, field artillery, tank destroyer, ordinance, and maintenance were also trained at Camp McCoy concurrently with the Second and 76th Divisions.[15] In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year, the personnel center also began to discharge veterans as the war came to a close. The personnel center closed in 1946, and most other functions of the camp halted a year later.[16]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of Regular, Reserve, and National Guard Units in the Fifth Army Area for service in the Korean War. Since 1953 the camp has become a center for training reserve units of the Army and National Guard Regiments of the Midwest Region.[17]

Building T-1551 was assigned to Special Services in January 1943 and remained under their control until June 1955 when it was assigned to the 438th Army Band. The structure was deactivated in 1969.[18]

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1551 is a well preserved and relatively unmodified example of the typical 800 series, TH-1038-S theater. It has a seating capacity of 1038 people. The high rectangular auditorium is abutted to the front by the lobby and the rear, by the dressing rooms. A tall rectangular chimney rises between the auditorium and dressing rooms. The clear span of the theater is achieved with a wooden Pratt truss with a shallow-pitched top chord. The length and size of the truss is the same as that used for the the Maintenance Shop, Building T-1463. On the basis of visual inspection and historical documentation, Building T-1551, while in generally poor condition, is one of the best preserved and least altered of the theaters at Fort McCoy.

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D (page 4)

2. Condition of Fabric: The general condition of Building T-1551 is moderate to poor. Areas of deterioration noted in the structure's exterior include places where the original cement asbestos siding has fallen off and either been replaced or left bare and areas where the siding has been broken through for truss repair. The exterior paint is peeling, and some warping and wood rot was observed where the end grains of beams have been exposed to moisture. The roof truss for the structure was repaired in 1976 for cracks in five of the seven main roof trusses. In all, eighteen cracks in Truss No.'s 3,4,5,6 and 7 were repaired.[19]

B. Description of the Exterior:

1. Overall Dimensions: Building T-1551 is rectangular in shape and measures approximately 169'- 6" in length and 76'- 1-1/2" in width. The height from grade to the roof ridge is approximately 25'- 1-3/4".[20]

2. Foundations: Building T-1551 has a 1'-1" wide x 8" high reinforced-concrete strip footing with a 9" wide reinforced-concrete skirt. Steel rods, measuring 1/2", are used at 9" o.c. horizontally and 18" o.c. vertically for reinforcement in the skirt. 15" x 18" reinforced concrete piers transfer column loads to 5'-0" wide x 3'-6" long x 1'-4" deep reinforced concrete pad footing. The outside face of the piers is flush with the outside face of the skirting. The piers are reinforced with 6'-3/4" steel bars vertically and wrapped with 3/8" ties 12" o.c. placed 2" from each face. The pad footing is reinforced with 9'-1/2" bars each way placed 4" from the bottom.

3. Walls: The exterior walls consist of three layers: wooden sheathing nailed to stud framing, black construction paper, and cement asbestos siding measuring 11" x 24", the standard size used throughout the cantonment.

4. Structural System, framing: Building T-1551 is of light frame construction. The roof is supported by a wood Pratt truss with a top chord pitched at a 1 to 12 slope to the outside edge. The depth of the truss is approximately 6'-0" at the edge and 9'-1" at the center with a ten-panel division through the entire length. The bottom chord is composed of two 3" x 10" members and the top chord is composed of two 3" x 12" members. The vertical web members vary in size. Two 2" x 12" members complete the first panel, two 2" x 10" members complete the second, two 2" x 8" members the third, two 2" x 6" members the fourth and a 3/4" diameter steel rod in the center king-post position. The diagonal members vary in an analogous manner. All connections are made with 4" split rings fastened with 3/4" diameter bolts and 3" x 3/16" washers. Three 3" x 14" planks compose the vertical end member of the truss, transferring the loads to the foundation.

5. Porches stoops: The public entrance to Building T-1551 has a concrete stoop with a covered porch the same width as the auditorium. It contains two ticket booths publicly accessible from the exterior at opposing ends. Above this single-story

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D (page 5)

porch, the form of the projection room is visible. A small covered entrance vestibule with double doors and a gabled roof protrudes from the single-story dressing room area. Each longitudinal side of the auditorium block has three openings, each with a different architectural treatment for the porch/stoop arrangement. The double doors at the rear of the auditorium open onto an uncovered concrete stoop with two steps down to grade. In the middle of the auditorium block, concrete steps rise from below grade covered by a wooden porch. This reflects the sloped floor of the auditorium which is below grade at this point. The direct outside entrance to the stage itself is through an independent enclosed vestibule.

6. Chimneys: The chimney is located within the boiler room and rises approximately 50'-0" above grade. It is located on the center longitudinal axis of the theater, in between the mass of the auditorium and the dressing rooms. The chimney is constructed of red-buff brick in a running bond with Portland cement mortar. The chimney exhausted fumes from the coal-burning furnace.

7. Openings:

   a. Doorways and Doors: At the north front of the building, there is a single four-light triple-recessed panel door used for entry in the theatre office, and a set of two, four-door entries, one in the building center and one to the west of center. The center entry has four, five-panel doors. The west entry has a set of four, four-light three-panel entries. At the west wall there is one double-door exit with two, five-panel doors, one enclosed exit with a double door composed of two, four-light three-panel doors, and one roofed exit with two, five-paneled doors. At the east wall there is one double-door exit with two, five-panel doors, one enclosed exit with a double door composed of two, four-light three-panel doors, and one roofed exit with two, five-panel doors. At the rear, there is a single enclosed entry with a double door composed of two, four-light three-panel doors.

   b. Windows: On the first-floor front porch there is one, three-over-six-light double-hung window in the theatre office and one, three-over-six-light double-hung window in each ticket booth. The ticket booths have single-light fixed windows with circular cuts in the window center and semi-circular cuts at the botttom. On the second-story there are three, eight-light fixed windows with simple architrave. At the west and east walls there are two, six-panel double-hung windows at the rear of the building (dressing room and boiler room). At the rear, there are four, six-panel double-hung windows on the west side (dressing room) and one, six-panel double-hung window to the east of the boiler room.

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D (page 6)

C. Description of the Interior:

1. Floor Plans:

a. Basement: There is no basement under Building T-1551. The crawl space is at grade.

b. Main Floor: Building T-1551, as constructed in 1942, had a gross area of 13,417 square feet. There are seventeen rooms in the building; the foyer, the lobby, two ticket booths, an office, the auditorium, two dressing rooms with toilets, a men's toilet, a women's toilet, a utility room, prop room, rewind room, catwalk, fan room, projection room, and boiler room.

c. Attic: The attic contains the catwalk and roof trusses.

2. Stairways: There are two wooden stairs descending from the side of the stage platform to the auditorium floor. There is a wooden stair from the lobby area to the projection room.

3. Flooring: The finished auditorium floor is poured concrete. The stage floor is a raised wooden platform. Lack of plans and electrical power to the buildings prevented a more detailed inspection.

4. Wall and Ceiling finishes: The interior finish material of the auditorium and lobby is painted mineral fiberboard nailed directly to the stud frame wall.

5. Openings: Walls on each side of the stage provide an off-stage preparation area and together work to form a proscenium for the stage platform.

6. Mechanical Equipment:

a. Heating: The structure was heated by a coal-fired steam boiler. Heat was dissipated via blowers, heating ducts and steam radiators. A Nash Engineering condensation pump and a Trane Blower unit were installed in the system in 1943 and a Winkler electric coal stoker was added in 1944.[21]

7. Original Furnishings: At the time of inspection, original bench seating was present. However, all benches had been placed in a pile near the rear of the auditorium.

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D (page 7)

D. Site:

1. General Setting and orientation: Building T-1551 and the other buildings of Block 15 are arranged on a wedge-shaped rectangular pattern running generally south-southeast to north-northwest along its long axis. The building is south of the access road to the post Main PX and barber shop and immediately west of the South Headquarters Road, the main access to Fort McCoy.[22]

2. Historical Landscape Design: To the west of the building there is an asphalt parking lot. An asphalt and gravel sidewalk is located between the building and South Headquarters Road. The remainder of the building lot is relatively flat and planted in grass.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building 1551 was built from 800 series plan number 800-500 and associated plan numbers 800-501, 800-502, 800-503, 800-504, 800-505, 800-506, 800-507, 800-508, 800-509, 800-510, 800-511, 800-512, 800-513, 800-514, 800-145, 800-151, 800-157, 800-185, 800-186, 800-187, 800-190, 800-199, 800-504, 800-515.[23] The original plans used to construct the four TH-1038-S theatres are currently on file in "As Built" envelope #88 in Building 2111 at Fort McCoy.

B. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 800 Series Plan numbers 800-500*, 800-501*, 800-502*, 800-503*, 800-505*, 800-506, 800-507, 800-508, 800-509, 800-510, 800-511, 800-512, 800-513, 800-514, 800-145, 800-151, 800-157, 800-185, 800-186, 800-187, 800-190, 800-199, 800-504, 800-515. (* indicates these plans were modified at Ft. McCoy)

b. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project -- General Layout Plan No. 6150-L, May 23, 1942.

c. Record Drawing file #88 in "As Built Files, Building T-2111, Fort McCoy, Wisconsin.

d. Real Property Record. Building and Structures, Building T-2145, Fort McCoy, Wisconsin.

2. Secondary and published sources:

"As Built" file # 88, Building T-2111, Fort McCoy, Wisconsin

Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg. 2160. Original January -11-1965; Revision #11 June-4-1976.

Buildings and Structures Descriptions, from box marked "Save Historical"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

Equipment Records, from file marked "Equipment Records"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

"Historical Summary", typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca.1985, p 6.

Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States*. [volume in the series, *United States Army in World War II: The Technical Services*] (Washington, D.C.: Office of the Chief of Military History, United States Army) pp 349.

Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet Building T-2145 "Meatlocker".

Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building T-2145 "Meatlocker", Fort McCoy, Wisconsin

Real property records file; Building T-2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building T-2145 "Meatlocker", Fort McCoy, Wisconsin.

"To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p.1, c. 8.

Unmarked wooden File Box, Building T-2145, "Meatlocker", Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

C. Likely Sources Not Investigated:

1. Documentary: Information on the firm charged with the construction of Building T-1551 may be available. Additional data may be available in the National Archives on George E. Bergstrom and the other architects who produced and revised the 800 series Standard Drawings.

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D (page 9)

2. Oral History: Interviews could be conducted with personnel involved in the construction of the theatres at Fort McCoy and local informants who may have attended showings at the theatre may be found.

D. Supplemental Materials:

1. The original "As Built" drawings for Building T-1551 are filed in Building T-2111, at Fort McCoy, Wisconsin. They would not duplicate and as such could not be included with the documentation. Standard plans for the 800 series TH-1038-S are available from the National Archives.

Prepared by: James A. Glass Phd.
Field Supervisor
HABS Phase - Fort McCoy Project
September 1988

and

Keith Landreth, Richard Hayes
Associate Investigators
CERL Phase - Fort McCoy Project
December 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D (page 10)

NOTES:

1. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

2. Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

3. "As Built" file 4 88, Building 2111, Fort McCoy, Wisconsin.

4. Completion label appended to Record Drawing # 800-500. "As Built" envelope #88, Building 2111, Fort McCoy, Wisconsin. All four (4) 1038S structures at Fort McCoy were built according to this record plan.

5. Real property records file; Building 2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

6. Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States [volume in the series, United States Army in World War II*: The Technical Services] (Washington, D.C.: Office of the Chief of Military History, United States Army) pp 349.

7. "To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p.1, c. 8.

8. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23, 1942. Original blueline print in map file cabinet building 2145 "Meatlocker".

9. "As Built" file #88, Building 2111, Fort McCoy, Wisconsin.

10. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

11. "As Built" file 088, Building 2111, Fort McCoy, Wisconsin 22.

12. Field Form # 103, Real Property Records, Building 2160, Fort McCoy, Wisconsin.

13. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

14. Diane Wasch and Perry Busch, (draft) History of the Design and Construction of Temporary World War II Buildings by the War Department. Historic American Buildings Survey, National Park Service, Washington, D.C. 1988 pp 42;47.

15. Post Engineer Office Historical Data, Document dated 15 January 1946, on file Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

16. Ibid.

17. "Historical Summary", typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca.1985, p

18. Unmarked wooden File Box, building 2145, "Meatlocker", Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

FORT McCOY, BUILDING T-1551 (THEATER)
[Camp McCoy, Building T-1551 (Theater)]
HABS NO. WI-308-D (page 11)

19. Office of the Post Engineer, Truss Diagram - Truss Repair Bldg. 1551 in "As Built" file 088, Building 2111, Fort McCoy, Wisconsin.

20. Real Property Record Building 1046; Real property records office, Building 2160 Fort McCoy, Wisconsin.

21. Box entitled "Equipment Records", building 2145 "Meatlocker", Fort McCoy, Wisconsin.

22.Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

23."As Built" file #88, Building 2111, Fort McCoy, Wisconsin.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-1551 (THEATER) HABS NO. WI-308-D
[Camp McCoy, Building T-1551 (Theater)]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-D-1 VIEW OF WEST (FRONT) ENTRANCE

WI-308-D-2 VIEW OF EAST (REAR)

WI-308-D-3 VIEW OF SOUTH SIDE SHOWING CHIMNEY

WI-308-D-4 DETAILED VIEW OF WEST (FRONT) ENTRANCE PORCH, TICKET BOOTH

WI-308-D-5 DETAILED PERSPECTIVE VIEW OF EAST (REAR) EXIT WAY

WI-308-D-6 DETAILED ELEVATED VIEW OF EAST (REAR) EXIT WAY

WI-308-D-7 VIEW OF AUDITORIUM LOOKING WEST THROUGH PROJECTION HOLE AT BACK OF BUILDING

WI-308-D-8 VIEW OF AUDITORIUM LOOKING EAST FROM STAGE

WI-308-D-9 VIEW OF CONCESSION ROOM IN WEST (FRONT) OF BUILDING

WI-308-D-10 DETAILED VIEW OF STAGE

BUILDING T-1463

MAINTENANCE SHOP

Figure 69. Perspective view of west (rear) and north side.

Figure 70. Interior view from east looking to west wall.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-1463 (MAINTENANCE SHOP)
[Camp McCoy, Building T-1463 (Maintenance Shop)]
HABS NO. WI-308-E

Location: Building T-1463 is located approximately 200' south of South Tenth Avenue in the USAR Equipment Pool Compound, in Block 14 of the cantonment of the Main Post of Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

USGS Quadrangle Alderwood Lake, Wisconsin; 7.5 minute series 1983 (photorevised from 1978) UTM Coordinates: Zone 15. 4875940 N 686040 E

Present Owner: Department of the Army

Original Use: Maintenance Shop General Purpose Type MRS-1

Present Use: Unknown

Significance: Building T-1463 is significant as a relatively unmodified representative of a maintenance shop. It represents the only 800 series MRS-1 structure constructed at Fort McCoy in 1942.[2] The trusses in Building T-1463 have a history of failure and the structure is scheduled for demolition.

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1463 probably began in the summer or fall of 1942. There is a minor discrepancy on the date of building completion. Notations on the "As Built" drawing 800-959 state that the building was completed by December 3, 1942.[3] However the Real Property Records on file in Buildings T-2160 and T-2145 note the building as completed on October 3, 1942.[4]

2. Architect: George E. Bergstrom, Chief of the Architectural Unit in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 1941 revision of the 700 series maintenance shop plans that produced the 800-959 series drawings in April 1941.[5]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[6] The owner from 1942-47 was theWar Department. Since 1947, the U.S. Department of the Army, the successor to the War Department has held title.

4. Builder, contractor, suppliers: Building T-1463 was part of construction area B at Fort McCoy. Bids for the construction of the cantonment were let in February 1942 and contracts were awarded in late March. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building T-1463 and the rest of the cantonment in the spring of 1942. The remaining materials used in construction were apparently purchased by subcontractors in the Wisconsin area.[7]

5. Original Plans and Construction: Building T-1463 was built from 800 series plan number 800-959 and associated plan numbers 800-960, 800-961, 800-962, 800-963, 800-964, 800-965, 800-966, 800-967, 800-967.1, and 800-968.[8] The original plans used to construct Building T-1463 are currently on file in "As Built" envelope #196 in Building T-2111. The original cost of the building was $79,338.[9] Noted alterations to the original building plan at the time of construction include the use of steel reinforcement in footings and piers, the omission of two concrete ramps at the east and west elevations, and the use of gypsum board to cover the walls and trusses in the boiler room.[10]

6. Alterations and additions: Alterations to the original plan, as noted above, include the use of steel reinforcement in the structure footings and piers, the omission of concrete ramps from the east and west elevations and the use of gypsum board rather than wall board to cover the walls and trusses in the boiler room. The following changes have been made to the structure since construction. An Allis Chalmers Exhaust Fan was installed in October 1942.[11] On the exterior, the grayish white cement asbestos siding has been replaced in many areas with white siding of similar size and wavy texture at various undocumented dates. The building eaves were extended and repaired, a sprinkler system was installed and the exterior and interior office were repainted in 1951. The office floor was repainted in 1953 and the exterior was repainted in 1959 and 1965.[12] In 1972, a booster fan was added to the air intake in the paint shop. The structure was rewired, 130 fluorescent fixtures added, and eleven of the fifteen roof trusses were repaired in 1974. Also at this time, all obsolete wiring and fixtures were removed from the building. Four electric hoists were installed in 1974.[13] Insulation was added to the roof in 1979 and the sidewalls in 1980. The coal furnace was converted to burn wood pellets and a pellet bin was installed on the south in 1982. Two exhaust fans were added in 1982 and the paint room was upgraded in 1987. The upgrade to the paint room included the installation of a King Air Systems exhaust fan and two canopies on the north.[14] The roof was upgraded with asphalt shingles and new flashing, and aluminum storm windows were added to the first tier of windows at an unknown date.

B. Historical Context:

The construction of Building T-1463 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II

Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-1463, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization buildings.

Building T-1463 was the only type MRS-1 Motor Repair Shop constructed in the main cantonment area of the "New Camp McCoy," a mobilization cantonment built by the War Department between the entrance of the United States into World War II late in 1941 and early 1943.[15] The 1941-43 cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.[16] Two newly organized Army Divisions occupied Camp McCoy during their training. The Second Army Division arrived soon after the completion of construction in the fall of 1942 and remained until November 1943, leaving for action in the Italian Campaign. The 76th Division then took over, remaining until December 1944, when they departed for service in the Battle of the Bulge and the subsequent occupation of Germany. Additionally, engineer, railhead, field artillery, tank destroyer, ordnance, and maintenance troops were trained at Camp McCoy concurrently with the Second and 76th Divisions.[17] In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year the personnel center began also to discharge veterans as the war came to a close. The personnel center closed in 1946, and most other functions of the camp halted a year later.[18]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of Regular, Reserve, and National Guard Units in the Fifth Army Area for service in the Korean War. Since 1953 the camp has become a center for training reserve units of the Army and National Guard Regiments of the Midwest Region.[19]

Building T-1463 was assigned to the Second Division on November 11, 1942. On November 24, 1943 the building was reassigned to the 76th Division. The Engineering Division was assigned to the structure until July 2, 1946 when T-1463 was assigned to "Task Force Frost." Task Force Frost was relieved on 4 June 1947. No additional data on the building occupants were available.[20]

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Externally, Building T-1463 is a well preserved, relatively unmodified example of a typical 800 series, Motor Repair Shop. The

FORT McCOY, BUILDING T-1463 (MAINTENANCE SHOP)
[Camp McCoy, Building T-1463 (Maintenance Shop)]
HABS NO. WI-308-E (page 4)

massing of the building is long and rectangular with a footprint of approximately 240' x 74'. The height to the eave is approximately 20'. The long sides are organized into fourteen bays of 15'-0" each. A significantly tall chimney at one end provides vertical counterpoint. Building T-1463 uses the same type of truss as the Theater Building T-1551.

2. Condition of Fabric: The general condition of Building T-1463 is moderate to poor. Areas of deterioration noted in the structure exterior include places where the original cement asbestos siding has fallen off and either been replaced or left bare and areas where the siding has been broken through for truss repair. The exterior paint is peeling and some warping and wood rot was observed where the end grains of beams have been exposed to moisture. One complete eight-over-eight-light double-hung sash window frame has been removed on the south wall. The roof truss for the structure was repaired in 1976 for cracks in all of the fifteen roof trusses. In all, twenty-six cracks in Truss Nos. 1 through 15 were repaired.[21]

B. Description of the Exterior:

1. Overall Dimensions: Building T-1463 is rectangular in shape and measures approximately 240' in length and 76' in width. The height from grade to the roof ridge is 22'-10-3/4".[22]

2. Foundations: Building T-1463 has a 1'-1" wide x 8" high reinforced-concrete strip footing with a 9" wide reinforced-concrete skirt. 1/2" steel rods are used at 9" on-center horizontally and 18" on-center vertically for reinforcement in the skirt. 15" x 18" reinforced concrete piers transfer column loads to 5'-0" wide x 3'-6" long x 1'-4" deep reinforced concrete pad footing. The outside face of the piers are flush with the outside face of the skirting. The piers are reinforced with 6-3/4" steel bars vertically and wrapped with 3/8" ties 12" on-center placed 2" from each face. The pad footing is reinforced with 9-1/2" bars each way, placed 4" from the bottom.

3. Walls: The exterior walls of Building T-1463 consist of three layers: wooden sheathing, black construction paper, and cement asbestos siding measuring 11" x 24", the standard size used throughout the cantonment.

4. Structural System, framing: Building T-1463 is of light frame construction. The roof is supported by a wood Pratt truss with a top chord pitched at a 1 to 12 slope to the outside edge. The depth of the truss is approximately 6' at the edge and 9'-1" at the center with a ten-panel division through the entire length. The bottom chord is composed of two 3" x 10" members and the top chord is composed of two 3" x 12" members. The vertical web members vary in size. Two 2" x 12" members complete the first panel, two 2" x 10" members complete the second, two 2" x 8" members the third, two 2" x 6" members the fourth and a 3/4" diameter steel rod in the center king-post position. The

diagonal members vary in an analogous manner. All connections are made with 4" split rings fastened with 3/4" diameter bolts and 3" x 3/16" washers. Three 3" x 14" planks compose the vertical end member of the truss, transferring the loads to the foundation. Wood columns supporting every other truss in the open area at the third panel point from each side were added at an unknown date.

5. Chimneys: The chimney is located outside the boiler room and rises approximately 65' above grade. The chimney is constructed of red-buff brick in a running bond with Portland cement mortar. When in use the chimney served as exhaust for the fumes emitted from the coal-burning furnace.

6. Openings:

   a. Doorways and Doors: At the east side there is a single four-light three-panel door used for personnel entry and two, 12'-0" x 12'-0" doors for vehicle entry. On the west and north, there are single, four-light three-panel doors with canopies used for personnel entry and one, 12'-0" x 12'-0" sliding door for vehicle entry. There are no entrances to the south.

   b. Windows: On the east and west, there is a set of three, fixed sixteen-light windows with three, fixed eight-light windows directly overhead. On the south and north, the pattern is repeated every 18'-0" with an additional set of three, fixed eight-light windows overhead.

C. Description of the Interior:

1. Floor Plans:

   a. Basement: There is no basement under Building T-1463.

   b. Main Floor: Building T-1463, as constructed in 1942, had a total square footage of 18,270. There are twelve divisions or rooms in the building; welding shop, testing area, office, tool shop, men's latrine, women's latrine, paint shop, cleaning bay, machine shop, vehicle bays, the main shop area and the boiler room.

   c. Attic: The structure does not have an attic.

2. Stairways: There are no stairways in Building T-1463.

3. Flooring: The flooring consist of concrete slabs with drains. The interior partition walls are set upon a 6" concrete curb.

4. Wall and Ceiling finishes: The ceiling is not finished. The office and latrines in the southwest area of the shop are finished on the outside with wood siding

and painted to a height of approximately 6'. The paint shop is finished with painted wall board. All other partitions are finished on one side with wood siding.

5. Openings: Interior doors that date to the time of construction are four-light, three-panel types.

6. Decorative Trim: None.

7. Hardware: The original galvanized metal knobs and rim locks survive on all remaining exterior and interior doors that date to the time of construction. The original hardware on all of the fixed windows also remains. The original hardware listing for the building includes the following equipment: hydraulic press, two electric hack saws, 12" and 24" shapers, four grinders, three lathes, valve grinder, brake drum lathe, honing machine, forge, steam cleaner and air compressor.[23] The original plumbing is intact. All original electrical equipment and fixtures have been removed.

8. Mechanical Equipment:

   a. Heating: The structure was originally heated by a "Kewanee" coal fired steam boiler. Heat was dissipated via 14-unit heaters suspended from the ceiling trusses.[24]

   b. Ventilation: The building is vented through exhaust fans and louvers to the north and east. There are also metal ventilators on the roof of the structure.

   c. Lighting: All original electrical equipment and fixtures have been removed.

   d. Plumbing: The original cast-iron plumbing fixtures remain in both toilet rooms.

D. Site:

1. General setting and orientation: Building T-1463, and the other buildings of Block 14, are arranged in a rectangular pattern running generally south southwest to north-northeast along its long axis. The building is south of Tenth Avenue in the USAR Equipment Pool Compound. Three warehouses are located immediately north of the structure and a gravel parking lot for the Motor Pool is located immediately south of the structure. The entire compound is fenced in barbed wire. An asphalt parking lot is situated outside the compound to the east.[25]

2. Historical Landscape Design: To the east of the building there is an asphalt parking lot. A gravel parking lot for the Motor Pool is located immediately south of the structure. The entire compound is fenced in barbed wire. The remainder of the building lot is relatively flat and graveled.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building 1463 was built from 800 series plan numbers 800-959, 800-960, 800-961, 800-962, 800-963, 800-964, 800-965, 800-966, 800-967, 800-967.1, and 800-968.

B. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 800 Series Plan numbers 800-959, 800-960, 800-961, 800-962, 800-963, 800-964, 800-965, 800-966, 800-967,800-967.1, and 800-968.

b. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project -- General Layout Plan No. 6150-L, May 23, 1942.

c. Record Drawing file #196 in "As Built Files, Building T-2111, Fort McCoy, Wisconsin.

d. Real Property Record. Building and Structures, Building T-2145, Fort McCoy, Wisconsin.

2. Secondary and Published sources:

"As Built" file # 196, Building T-2111, Fort McCoy, Wisconsin

Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg. T-2160. Original January -11-1965; Revision #11 June-4-1976.

Buildings and Structures Descriptions, from box marked "Save Historical"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

Equipment Records, from file marked "Equipment Records"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

"Historical Summary", typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

FORT McCOY, BUILDING T-1463 (MAINTENANCESHOP
[Camp McCoy, Building T-1463 (Maintenance Shop)]
HABS NO. WI-308-E (page 8)

Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States*. [volume in the series, *United States Army in World War II: The Technical Services*] (Washington, D.C.: Office of the Chief of Military History, United States Army), pp. 349.

Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet Building T-2145 "Meatlocker".

Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building T-2145 "Meatlocker", Fort McCoy, Wisconsin

Real property records file; Building T-2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building T-2145 "Meatlocker", Fort McCoy, Wisconsin.

"To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

Unmarked wooden File Box, Building T-2145, "Meatlocker", Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

C. Likely Sources Not Investigated:

1. Documentary: Information on the firm charged with the construction of Building T-1463 may be available. Additional data may be available in the National Archives on George E. Bergstrom and the other architects who produced and revised the 800 series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction of the Motor Repair Shop at Fort McCoy and the military records could be searched for personnel who may have worked at the shop.

D. Supplemental Materials:

1. The original "As Built" drawings for Building T-1463 are filed in Building T-2111, at Fort McCoy, Wisconsin. Standard plans for the 800 series MRS-1 are available from the National Archives.

Prepared by: James A. Glass Ph.D.
Field Supervisor
HABS Phase - Fort McCoy Project
September 1988

and

FORT McCOY, BUILDING T-1463 (MAINTENANCE SHOP)
[Camp McCoy, Building T-1463 (Maintenance Shop)]
HABS NO. WI-308-E (page 9)

Keith Landreth, Richard Hayes
Associate Investigators
CERL Phase - Fort McCoy Project
December 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

NOTES:

1. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

2. Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

3. Completion label appended to Record Drawing N 800-959. "As Built" envelope #196, Building 2111, Fort McCoy, Wisconsin.

4. Real property records file; Building 2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

5. Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States* [volume in the series, United States Army in World War II: The Technical Services] (Washington, D.C.: Office of the Chief of Military History, United States Army) pp 349.

6. "To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p.1, c. 8.

FORT McCOY, BUILDING T-1463 (MAINTENANCE SHOP)
[Camp McCoy, Building T-1463 (Maintenance Shop)]
HABS NO. WI-308-E (page 10)

7. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet building 2145 "Meatlocker".

8. "As Built" file #196, Building 2111, Fort McCoy, Wisconsin. Also see 800 series standardized drawings 800-959, 800-960, 800-961, 800-962, 800-963, 600-964, 8OO-965, 800-966, 800-967,800-967.1, and 800-968 in nap file, Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

9. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

10. "As Built" file #196, Building 2111, Fort McCoy, Wisconsin.

11. "File entitled "Equipment Records", building 2145 "Meatlocker", Fort McCoy, Wisconsin.

12. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

13. Drawing Number 47-018-568, Truss Repair Bldg. 1463. "As Built" file #196, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

14. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

15. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

16. Diane Wasch and Perry Busch, (draft) History of the Design and Construction of Temporary World War II Buildings by the War Department. Historic American Buildings Survey, National Park Service, Washington, D.C. 1988 pp 42;47.

17. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

18. Ibid.

19. "Historical Summary", typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy nd., ca.1985, p 6.

20. Unmarked wooden File Box, building 2145, "Meatlocker", Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignee's.

21. Drawing Number 47-018-568, Truss Repair Bldg. 1463. "As Built" file 0196, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

22. Drawing dated 7-5-1951 by The Viking Automatic Sprinkler Company in. "As Built" file 4196, Building 2111, Fort McCoy, Wisconsin.

23. Drawing dated 7-5-1951 by The Viking Automatic Sprinkler Company in. "As Built" file #196, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

24. "As Built" file #196, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

25. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING 1463 (MAINTENANCE SHOP) HABS NO. WI-308-E
[Camp McCoy, Building 1463 (Maintenance Shop)]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-E-1 PERSPECTIVE VIEW OF EAST (FRONT) AND SOUTH SIDE

WI-308-E-2 PERSPECTIVE VIEW OF SOUTH SIDE

WI-308-E-3 DETAILED VIEW OF WINDOWS, SOUTH SIDE

WI-308-E-4 PERSPECTIVE VIEW OF WEST (REAR) AND SOUTH SIDE

WI-308-E-5 PERSPECTIVE VIEW OF WEST (REAR) AND NORTH SIDE

WI-308-E-6 INTERIOR VIEW FROM EAST LOOKING TO WEST WALL

WI-308-E-7 INTERIOR VIEW FROM WEST LOOKING TO EAST WALL

WI-308-E-8 DETAILED INTERIOR VIEW OF TRUSS

WI-308-E-9 DETAILED INTERIOR VIEW OF TRUSS

WI-308-E-10 DETAILED INTERIOR VIEW OF TRUSS

WI-308-E-11 DETAILED INTERIOR VIEW OF TRUSS SHOWING CABLES

WI-308-E-12 TONGUE AND GROOVE INTERIOR ENCLOSURE IN EAST END

BUILDING T-2002

GUEST HOUSE

Figure 71. *Perspective view of south (front) and east side.*

Figure 72. *Interior view of dayroom.*

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-2002 (GUEST HOUSE)
[Camp McCoy, Building T-2002, (Guest House)]
HABS NO. WI-308-F

Location: Building T-2002 is located approximately 100' east of the intersection of South Eleventh Avenue and West Twelfth Avenue, in Block 21 of the cantonment of the Main Post of Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

USGS Quadrangle Alderwood Lake, Wisconsin; 7.5 minute series 1983 (photorevised from 1978). UTM Coordinates: Zone 15: 4875720 N 683920 E.

Present Owner: Department of the Army

Original Use: Guest House

Present Use: Unused.

Significance: Building T-2002 is significant as a relatively unmodified representative of a guest house. It represents one of two guest houses constructed at Fort MCoy in 1942.[2] Of these two, the other has undergone major interior alterations.[3]

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-2002 probably began in the summer of 1942. The Real Property Records on file in Buildings 2160 and 2145 note the building as completed on 21 October 1942.[4]

2. Architect: Col. Hugh J. Casey in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 1941 revision of the 700 series standardized drawings of which building plan 700-1290 was part.[5]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[6] The owner from 1942-47 was the War Department. Since 1947, the U.S. Department of the Army, the successor to the War Department, has held title.

4. Builder, contract suppliers: Building T-2002 was part of construction area D at Fort McCoy. Bids for the construction of the cantonment were let in February 1942 and fixed-price contracts for seven principal construction areas were awarded in late March. The War Department purchased the lumber used in Building T-2002 and the rest of the cantonment in the spring of 1942. The remaining materials were apparently purchased by subcontractors in the Wisconsin area.[7]

FORT McCOY, BUILDING T-2002 (GUEST HOUSE)
[Camp McCoy, Building T-2002 (Guest House)]
HABS NO. WI-308-F (page 2)

5. Original Plans and Construction: No original "As Built" drawings for building plan 700-1290 were located in Building 2111 at Fort McCoy. The plans filed with the structure data for Building T-2002 are those specified for a 700-3560 structure, Womens Army Auxillary Barracks. The exterior sizes and details for these barracks are similar to the guest house exterior and may have been substituted at a later date after loss of the originals. The original cost of the building was $32,406.[8] Alterations to the original building plan at the time of construction are unknown due to the lack of "As Built" plans.

6. Alterations and additions: On the exterior, the grayish white cement asbestos siding has been replaced in a few places with white siding of similar size. The exterior of the structure was repainted in 1957, 1958 and 1964. The interior corridors were re-lined with linoleum in 1951.[9] The building was re-roofed with red asphalt shingles at an unknown date.

B. Historical Context:

The construction of Building T-2002 was part of a massive, nation-wide mobilization program designed to build cantonments in which to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of wood temporary buildings such as the T-2002, the 1939 housing capacity of 200,000 persons was raised to 6,000,000 by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, the fabrication of units, and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-2002 was one of two guest houses constructed in the main cantonment area of the "New Camp McCoy," a mobilization cantonment built by the War Department between the entrance of the United States into World War II late in 1941 and early 1943.[10] The 1941-1943 cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.[11] Two newly organized Army Divisions occupied Camp McCoy during their training. The Second Army Division arrived soon after the completion of construction in the fall of 1942 and remained until November 1943, leaving for action in the Italian Campaign. The 76th Division then took over, remaining until December 1944, when they departed for service in the Battle of the Bulge and the subsequent occupation of Germany. Initially, engineer, railhead, field artillery, tank destroyer, ordnance, and maintenance troops were trained at Camp McCoy concurrently with the Second and 76th Divisions.[12] In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year the personnel center began also to discharge veterans as the war came to a close. The personnel center closed in 1946, and most other functions of the camp halted a year later.[13]

FORT McCOY, BUILDING T-2002 (GUEST HOUSE)
[Camp McCoy, Building T-2002 (Guest House)]
HABS NO. WI-308-F (page 3)

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of Regular, Reserve, and National Guard Units in the Fifth Army Area for service in the Korean War. Since 1953 the camp has become a center for training reserve units of the Army and National Guard Regiments of the Midwest Region.[14]

After construction, Building T-2002 was assigned to Special Services. In 1956 the building served as an Officers Snack Bar. In 1957, it was reassigned to Special Services until deactivation in 1969.[15]

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-2002 is a well preserved relatively unmodified example of a typical 700 series guest house. On the basis of visual inspection and historical documentation, Building T-2002 appears to be the least altered of the remaining two guest houses at Fort McCoy.

2. Condition of Fabric: The general condition of Building T-2002 is good. Deterioration areas noted in the structure's exterior include areas where the original cement asbestos siding has fallen off and been replaced and some warping where flaking paint has exposed the end grain of some exterior wood beams. No significant deterioration was noted in the structure's interior.

B. Description of the Exterior:

1. Overall Dimensions: Building T-2002 is rectangular in shape and measures approximately 130' in length and 29'-6" in width. This is the same width as Buildings T-100 and T-1863. The height from grade to the roof ridge is approximately 31'. The free-standing chimney has been removed but would have originally stood 4'-0" over the roof ridge.

2. Foundations: The foundation of Building T-2002 consists of rows of round concrete piers on concrete sootings. This was not confirmed in the field but in the drawings available. The crawl space below the guest house is screened with concrete block skirting.

3. Walls: The exterior walls of Building T-2002 consist of three layers: wooden sheathing, black construction paper, and cement asbestos siding measuring 11" x 24", the standard size used throughout the cantonment.

4. Structural System, framing: The structure consists of light wood frame with a pitched truss roof.

FORT McCOY, BUILDING T-2002 (GUEST HOUSE)
[Camp McCoy, Building T-2002 (Guest House)]
HABS NO. WI-308-F (page 4)

5. Porches, stoops: Building T-2002, like all 2942 cantonment buildings at McCoy, has poured concrete steps with cast-iron railings at the front, rear and side entrances. There are two eighteen-riser stairways leading to the second floor at the front and rear elevations. The stairways have plain square balustrades and are not covered.

6. Chimneys: The chimney has been removed. The chimney was probably, like all others at McCoy, constructed of red brick in a running bond with Portland cement mortar and was free-standing. When in use the chimney served as exhaust for the fuses emitted from the coal-burning furnace.[16]

7. Openings:

   a. Doorways and Doors: At the front and rear of the building a four-light two-panel door was used at the first- and second-floor entries to the guest house. A first-floor entry is located at the east wall and contains a single four-light two-panel door. No notes on door specifications for guest houses were available in the "As Built" files in Building T-2111.

   b. Windows: The east side has twenty-three, eight-over-eight-light, double-hung sash windows (quarters) and five, four-over-four-light double-hung sash windows (bathrooms/toilets). The west side has eighteen, eight-over-eight-light double-hung sash windows (stair well, quarters) and five, four-over-four-light (bathroom, boiler room). The front has four, eight-over-eight-light double-hung windows. The rear has four, eight-over-eight-light double-hung windows. All windows have simple architraves and screens.

C. Description of the Interior:

1. Floor Plans:

   a. Basement: There is no basement under Building T-2002. The crawl space is at grade.

   b. Main Floor: Building T-2002, as constructed in 1942, had a total square footage of 7,670'. There are five, three-bed suites, thirty-two bedrooms, three baths, and a heater room.

   c. Attic: The attic space above the main floor contains the trusses.

2. Stairways: There is a turned fifteen-riser stairway with a central landing leading from the first-floor corridor to the second floor. The stairway is located directly opposite the east side entry.

3. Flooring: The structure has hardwood floors. The flooring has been covered with checkerboard linoleum in the east side entry, and brown linoleum in the corridors.

4. Wall and Ceiling finishes: All wallboard surfaces in the interior have been painted.

5. Openings: The interior doors to the suites, bedrooms, bathrooms/toilets, and boiler room are three-paneled doors. No notes on door specifications for guest houses were available in the "As Built" files in Building T-2111.

6. Hardware: The original galvanized metal knobs and rim locks survive on all exterior and interior doors. The original hardware on all of the double-hung windows also remains. The original toilet fixtures and hall fountains have also been retained. Interior and exterior lighting fixtures also remain. The enameled porcelain reflector bowls have been removed from many of the light fixtures.

7. Mechanical Equipment:

   a. Heating: The structure was heated by a coal-fired steam boiler. Heat was dissipated via heating ducts and steam radiators. A Wagner electric blower unit was added to the system in September 1943.[17] An electric coal stoker was installed in the heating plant in 1976.[18]

   b. Ventilation: The structure is vented through two fixed wooden louvers in the attic at the gable ends and through screen openings in the ceiling of the second floor.

   c. Lighting: The front and rear first- and second-floor entries and the side entrance are lighted by single 100-watt fixtures attached directly above the entrances. Internal lighting consist of single sixty-watt fixtures in each room and a row of sixty-watt fixtures in the first- and second-floor corridors, entries and stairwell. The enameled porcelain reflector bowls have been removed from many of the light fixtures.

   d. Plumbing: The original cast-iron enameled plumbing and water fountains remain in the corridors, toilets and bathrooms.

D. Site:

1. General Setting and orientation: Building T-2002 and the street layout and other buildings of Block 20 are located at the southwestern apex of the Fort McCoy "Triad" design. The building is located within a "semi-isolated" complex containing the base post office, a recreation center and a theater.[19]

2. Historical Landscape Design: To the east and rear of the building there is a gravel parking lot. The remainder of the building lot is relatively flat and planted in

grass. Ornamental shrubs have been planted along the east and west walls.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-2002 was built from 700 series plan number 700-1290 and associated plan numbers 700-1245, 700-1291, 700-1292, 700-1301, 800-190, 800-194, 800-196 and 800-199. The original "As Built" plans used to construct the two guest houses could not be located.

B. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 700 Series Plan number 700-1290* and associated drawings 700-1245*, 700-1291*, 700-1292*, 700-1301, 800-190, 800-194, 800-196 and 800-199. (* These drawigns were modified at Ft. McCoy).

b. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project," General Layout Plan No. 6150-L, May 23, 1942. Record Drawing file 0183 in "As Built" Files, Building 2111, Fort McCoy, Wisconsin.

c. Record Drawing file #183 in "As Built Files, Building 2111, Fort McCoy, Wisconsin.

d. Real Property Record. Building and Structures Building 2145, Fort McCoy, Wisconsin.

e. File entitled "Equipment Records" , building 2145 "Meatlocker", Fort McCoy, Wisconsin.

2. Secondary and Published sources:

"As Built" file # 183, Building T-2111, Fort McCoy, Wisconsin Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg. T-2160. Original January -11-1965; Revision #11 June-4-1976.

Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

"Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States*. (volume in the series, *United States Army in World War II: The Technical Services*) (Washington, D.C.: Office of the Chief of Military History, United States Army).

Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project," General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in file cabinet Bldg. T-2145 "Meatlocker," Fort McCoy, Wisconsin.

Post Engineer Office Historical Data, Document dated 15, January 1946, on file Bldg. T-2145 "Meatlocker," Fort McCoy, Wisconsin.

Real property records file; Building T-2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Bldg. T-2145 "Meatlocker," Fort McCoy, Wisconsin.

To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p.1.

Unmarked wooden File Box, Bldg. T-2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

C. Likely Sources Not Investigated:

1. Documentary: Information on the firm charged with the construction of Building T-2002 may be available. Additional data may be available in the National Archives on Col. Hugh J. Casey of the Engineering Branch of the Construction Division, Quartermaster Corps who supervised the 1941 revision of the 700 series standardized drawings of which building plan 700-1290 was part.

2. Oral History: Interviews could be conducted with personnel involved in the construction of the guest houses at Fort McCoy and the McCoy records and other military archives could be searched for living personnel who occupied the quarters.

D. Supplemental Materials:

1. The original "As Built" drawings for Building T-2002 could not be located. Standard plans for the 700 series guest house are available from the National Archives.

Prepared by: James A. Glass Ph.D.
Field Supervisor
HABS Phase - Fort McCoy Project
September 1988

FORT McCOY, BUILDING T-2002 (GUEST HOUSE)
[Camp McCoy, Building T-2002 (Guest House)]
HABS NO. WI-308-F (page 8)

and

Keith Landreth, Richard Hayes
Associate Investigators
CERL Phase - Fort McCoy Project
December 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

NOTES:

1. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

2. Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

3. "As Built" file d 183, Building 2111, Fort McCoy, Wisconsin.

4. Real property records file; Building 2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

5. Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States* [volume in the series, United States Army in World War II: The Technical Services] (Washington, D.C.: Office of the Chief of Military History, United States Army) pp 349.

6. "To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p.1, c. 8.

7. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet building 2145 "Meatlocker".

FORT McCOY, BUILDING T-2002 (GUEST HOUSE)
[Camp McCoy, Building T-2002 (Guest House)]
HABS NO. WI-308-F (page 9)

8. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

9. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

10. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

11. Diane Wasch and Perry Busch, [draft] History of the Design and Construction of Temporary World War II Buildings by the War Department. Historic American Buildings Survey, National Park Service, Washington, D.C. 1988 pp 42, 47.

12. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

13. Ibid.

14. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy nd., ca.1985, p 6.

15. Unmarked wooden File Box, building 2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

16. Standard War Department Plan 800-559

17. Box entitled "Equipment Records," building 2lA5 "Meatlocker," Fort McCoy, Wisconsin.

18. Real Property Records, Building 2160, Fort McCoy, Wisconsin. Also see Real Property Records box, building 2145 "Meatlocker," Fort McCoy, Wisconsin.

19. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-2002 (GUEST HOUSE) HABS NO. WI-306-F
[Camp McCoy, Building T-2002 (Guest House)]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-F-1 PERSPECTIVE VIEW OF EAST (FRONT) AND NORTH SIDE

WI-308-F-2 CLOSER PERSPECTIVE VIEW OF EAST (FRONT) AND NORTH SIDE

WI-308-F-3 PERSPECTIVE VIEW OF EAST (FRONT) AND NORTH SIDE SHOWING EXTERIOR STAIR TO SECOND FLOOR ON NORTH WALL

WI-308-F-4 INTERIOR VIEW OF DAYROOM, NORTH ROOM, SHOWING POSTS AND BEAMS

WI-308-F-5 INTERIOR VIEW LOOKING SOUTH DOWN CORRIDOR FROM DAYROOM

WI-308-F-6 INTERIOR VIEW OF SUITE SHOWING BEDROOM AND BATH

WI-308-F-7 INTERIOR VIEW OF FIRST-FLOOR CENTRAL STAIR HALL FROM EAST ENTRY

WI-308-F-8 INTERIOR VIEW OF SECOND-FLOOR COMMUNAL BATHROOM

WI-308-F-9 INTERIOR VIEW OF SECOND-FLOOR COMMUNAL BATHROOM SHOWING BATH

BUILDING T-1863

OFFICERS' QUARTERS

Figure 73. Perspective view of south (front) and east side.

Figure 74. Interior view of dayroom.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-1863 (OFFICERS' QUARTERS)
[Camp McCoy, Building T-1863 (Officers' Quarters)]
HABS NO. WI-308-G

Location: Building T-1863 is located approximately 300' north of South Regimental Avenue, in Block 18 of the cantonment of the Main Post of Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

USGS Quadrangle Alderwood Lake, Wisconsin; 7.5 minute series 1983 (photorevised from 1978) UTM Coordinates: Zone 15: 4876020 N 684520 E.

Present Owner: Department of the Army.

Original Use: Officers Quarters.

Present Use: Occupied.

Significance: Building T-1863 is significant as a relatively unmodified representative of a Type OQ-23 Officers Quarters. It represents one of six type OQ-23 officers quarters constructed at Fort McCoy in 1942.[2]

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1863 probably began in the summer of 1942. There is a slight discrepancy on the building completion date. The real property records on file in Buildings 2160 note the building as completed on 24 August 1942,[3] while the "As Built" drawings in Building 2111 note the structure as completed on November 5, 1942.[4]

2. Architect: Col. Hugh J. Casey in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 700 series standardized drawings of which building plan 700-1254 was part.[5]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[6] The owner from 1942-47 was the War Department. Since 1947, the U.S. Department of the Army, the successor to the War Department, has held title.

4. Builder, contractor, suppliers: Building T-1863 was part of construction area D at Fort McCoy. Bids for the construction of the cantonment were let in February 1942 and fixed-price contracts for seven principal construction areas were awarded in late March. The War Department purchased the lumber used in Building T-

1863 and the rest of the cantonment in the spring of 1942. The remaining materials used in construction were apparently purchased by subcontractors in the Wisconsin area.[7]

5. Original Plans and Construction: The original "As Built" drawings for building plan 700-1254 and associated drawings 700-190, 700-194, 700-196, 700-199, 700-1300, 700-1301, 700-1302, and 700-1303, are located in Building 2111 at Fort McCoy.[8] The original cost of the building was $25,368.[9] Alterations and modifications to the original building plan at the time of construction include the deletion of the kitchen and the use of tempered pressed wood in place of tongue and groove in the corridors and all walls.[10] The "As Built" files also note the deletion of aqua medias on Buildings T-2007, T-2561, T-2778 but not on T-1863.

6. Alterations and additions: On the exterior, the grayish white cement asbestos siding has been replaced in a few places with white siding of similar size. The exterior of the structure has been repainted twice, in 1958 and 1964. The interior corridors were re-lined with linoleum tiles in 1951. An electric coal stoker was installed in the boiler room in 1981 and the building was "upgraded" in 1984.[11] No data on what modifications were made during the upgrade were available. The building was also re-roofed with red asphalt shingles, rewired, and a propane gas water heater was installed at an unknown date.

B. Historical Context:

The construction of Building T-1863 was part of a massive, nation-wide mobilization program designed to build cantonments in which to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comphrehensive set of drawings which could be used interchangeably in creating the various buildng types. Through the construction of temporary wood-frame buildings such as T-1863, the 1939 housing capacity of 200,000 persons was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, the fabrication of units, and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-1863 was one of six, 23-man officers quarters constructed in the main cantonment area of the "New Camp McCoy," a mobilization cantonment built by the War Department between the entrance of the United States into World War II late in 1941 and early 1943.[12] The 1941-43 cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.[13] Two newly organized Army Divisions occupied Camp McCoy during their training. The Second Army Division arrived soon after the completion of construction in the fall of 1942 and remained until November 1943, leaving for action in the Italian Campaign. The 76th Division then took over, remaining until December 1944, when they departed for service in the Battle of the Bulge and the subsequent occupation of Germany.

FORT McCOY, BUILDING T-1863 (OFFICERS' QUARTERS)
[Camp McCoy, Building T-1863 (Officers' Quarters)]
HABS NO. WI-308-G (page 3)

Additionally, engineer, railhead, field artillery, tank destroyer, ordnance, and maintenance troops were trained at Camp McCoy concurrently with the Second and 76th Divisions.[14] In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year the personnel center began also to discharge veterans as the war came to a close. The personnel center closed in 1946, and most other functions of the camp halted a year later.

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of Regular, Reserve, and National Guard Units in the Fifth Army Area for service in the Korean War. Since 1953 the camp has become a center for training reserve units of the Army and National Guard Regiments of the Midwest Region.[15]

There are no records on assignees for Building T-1863. The structure was deactivated in 1967 and reactivated in 1971.[16]

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1863 is a well preserved relatively unmodified example of the typical 700 series 23-man Officers Quarters without Mess. Building T-1863 appears to be one of the best preserved and least altered of the remaining six type OQ-23 structures at Fort McCoy.

2. Condition of Fabric: The general condition of Building T-1863 is good. Deterioration noted in the structure's exterior include areas where the original cement asbestos siding has fallen off and been replaced and some warping where flaking paint has exposed the end grain of some exterior wood beams. No significant deterioration was noted in the structure's interior.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1863 is rectangular in shape and measures approximately 80' in length and 29'- 6" in width. This is the same width as Buildings T-100 and T-2002. The height from grade to the roof ridge is approximately 25'. The chimney is located outside the structure and stands approximately 21' in height.

2. Foundations: The foundation of Building T-1863 consists of rows of round concrete piers on concrete footings. This was not confirmed in the field but in the drawings available. The crawl space below the guest house is screened with concrete-block skirting.

3. Walls: The exterior walls of Building T-1863 consist of three layers: wooden sheathing, black construction paper, and cement asbestos siding measuring 11" x 24", the standard size used throughout the cantonment. Aqua medias were constructed over the first- and second-floor windows. They extend 3'-0" from the building walls and are covered with red asphalt shingles.

4. Structural System, framing: The structure consists of a light-wood frame with a pitched truss roof.

5. Porches, stoops: Building T-1863, like all 1942 cantonment buildings at McCoy, has poured concrete steps with cast-iron railings at the front, rear, and west side entrances. There are second-floor wooden balconies above the front and rear exits. These were constructed to allow access to emergency fire ladders attached to the structure.

6. Chimneys: The chimney, like all others at McCoy, is free-standing and constructed of red brick in a running bond with Portland cement mortar. The chimney has a 15" fire clay flue lining and rests on a 10" thick concrete footing.[17]

7. Openings:

   a. Doorways and Doors: Four-light triple-recessed panel doors were used at the rear, front, and west side, first-floor entries and on the second-floor emergency exits. The entry to the boiler room (front elevation) has two, four-light three-panel doors. The doors match the specifications for doors in drawing 700-1300.[18]

   b. The windows are all eight-over-eight-light, double-hung sash; there are fifteen on the west side, thirteen on the east side, three on the front and four on the rear. All windows have simple architrave and screens.

C. Description of the Interior:

1. Floor Plans:

   a. Basement: There is no basement under Building T-1863. The crawl space is at grade.

   b. Main Floor: Building T-1863, as constructed in 1942, had a total square footage of 4,720. There are twenty-one, 10'-0" x 8'-0" bedrooms, a combination toilet/bath, and a boiler room.

   c. Attic: The attic space above the second floor contains the roof trusses.

FORT McCOY, BUILDING T-1863 (OFFICERS' QUARTERS)
[Camp McCoy, Building T-1863 (Officers' Quarters)]
HABS NO. WI-308-G (page 5)

2. Stairways: There is a turned, fifteen-step stairway with a central landing leading from the first-floor corridor to the second floor. The stairway is located directly opposite the west elevation entry.

3. Flooring: The structure has hardwood floors except the toilet/bath which has concrete flooring. The flooring in the corridors has been covered with brown linoleum tiles in the corridors.

4. Wall and Ceiling finishes: All wallboard and ceiling surfaces in the interior have been painted. The toilet/bath area has a horizontal wood board surface.

5. Openings: The interior doors to the suites, bedrooms, bathrooms/toilets, and boiler room are five-panel doors with no lights. These doors match the specifications in drawing 700-1254.[19]

6. Decorative Trim: All doorways and moldings are simple, square trim.

7. Hardware: The original galvanized metal knobs and rim locks survive on most interior doors. The original hardware on all of the double hung windows also remains. The original toilet fixtures have been retained. Most of the interior and exterior lighting fixtures were replaced when the structure was rewired.

8. Mechanical Equipment:

   a. Heating: The structure is heated by a coal-fired steam boiler. Heat is dissipated via heating ducts and steam radiators. A Lennox Furnace Company Electric Blower Unit was added to the system in September 1943.[20] An electric coal stoker was installed in the heating plant in 1981.[21] A propane tank and gas-fired hot water heater was added to the system at an unknown date.

   b. Ventilation: The structure is vented through two fixed wooden louvers in the attic at the rear and front walls and through 8" x 1'-10", screen openings in the ceiling of the first- and second-floor rooms and corridors. In addition, there are vents in the concrete-block skirting of the crawl-space.

   c. Lighting: Most of the interior and exterior lighting fixtures were replaced when the structure was rewired.

   d. Plumbing: The original cast-iron enameled plumbing remains in the toilets and bathrooms.

FORT McCOY, BUILDING T-1863 (OFFICERS' QUARTERS)
[Camp McCoy, Building T-1863 (Officers' Quarters)]
HABS NO. WI-308-G (page 6)

D. Site:

1. General Setting and orientation: Building T-1863 is located approximately 300' north of South Regimental Avenue in a row of buildings (T-1857 to T-1863) oriented generally south-southeast to north-northwest.[22]

2. Historical Landscape Design: To the south of the building there is a gravel parking lot and an unnamed gravel road. The remainder of the building lot is relatively flat and planted in grass.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1863 was built from 700 series plan numbers 700-1254, 700-190, 700-194, 700-196, 700-199, 700-1300, 700-1301, 700-1302, and 700-1303. The original "As Built" plans used to construct the six OQ-23 officers' quarters are located in Building 2111 at Fort McCoy, Wisconsin.

B. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 700 Series Plan number 700-1254* and associated drawings 700-190, 700-194, 700-196, 700-199, 700-1300, 700-1301, 700-1302, and 700-1303*. (* These drawings were modified at Ft. McCoy).

b. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project -- General Layout Plan no. 6150-L, May 23, 1942.

c. Record Drawing file #79 in "As Built" files, Building 2111, Fort McCoy, Wisconsin.

d. Real Property Record, Building and Structures, Building 2145, Fort McCoy, Wisconsin.

e. File entitled "Equipment Records," Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

2. Secondary and Published Sources:

"As Built" file #79, Building T-2111, Fort McCoy, Wisconsin.

FORT McCOY, BUILDING T-1863 (OFFICERS' QUARTERS)
[Camp McCoy, Building T-1863 (Officers' Quarters)]
HABS NO. WI-308-G (page 7)

Basic Information Map, Fort McCoy, Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Building T-2160. Original January -11-1965; Revision #11 June-4-1976.

Buildings and Structures Descriptions, from box marked "Save Historical"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

"Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca..1985, p. 6.

Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States*. (volume in the series, *United States Army in World War II: The Technical Services*) (Washington, D.C.: Office of the Chief of Military History, United States Army).

Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet Building T-2145 "Meatlocker," Fort McCoy, Wisconsin.

Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building T-2145 "Meatlocker," Fort McCoy, Wisconsin.

Real property records file; Building T-2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

"To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

Unmarked wooden File Box, Building T-2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing ,buildings and assignees.

C. Likely Sources Not Investigated:

1. Documentary: Information on the firm charged with the construction of Building T-1863 may be available. Additional data may be available in the National Archives on Col. Hugh J. Casey of the Engineering Branch of the Construction Division, Quartermaster Corps, who supervised the 1941 revision of the 700 series standardized drawings of which building plan 700-1254 was part.

2. Oral History: Interviews could be conducted with personnel involved in the construction of the officers quarters at Fort McCoy and the Fort McCoy records and other military archives could be searched for living personnel who occupied these or similar quarters.

FORT McCOY, BUILDING T-1863 (OFFICERS' QUARTERS)
[Camp McCoy, Building T-1863 (Officers' Quarters)]
HABS NO. WI-308-G (page 8)

D. Supplemental Materials:

The original "As Built" drawings for Building T-1863 could not be duplicated. Standard plans for the 700 series OQ-23 are available from the National Archives.

Prepared by: James A. Glass Ph.D.
Field Supervisor
HABS Phase - Fort McCoy Project
September 1988

and

Keith Landreth, Richard Hayes
Associate Investigators
CERL Phase - Fort McCoy Project
December 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Research Laboratory (USACERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

NOTES:

1. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

2. Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

3. Real property records file; Building 2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

FORT McCOY, BUILDING T-1863 (OFFICERS' QUARTERS)
[Camp McCoy, Building T-1863 (Officers' Quarters)]
HABS NO. WI-308-G (page 9)

4. Record Drawing file #79 in "As Built Files , Building 2111, Fort McCoy, Wisconsin.

5. Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States* [volume in the series, *United States Army in World War II: The Technical Services*] (Washington, D.C.: Office of the Chief of Military History, United States Army) pp 349.

6. "To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p.1, c. 8.

7. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23, 1942. Original blueline print in map file cabinet building 2145 "Meatlocker."

8. Record Drawing file 079 in "As Built Files, Building 2111, Fort McCoy, Wisconsin.

9. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

10. Record Drawing file #79, Drawing 700-1254 in "As Built" Files, Building 2111, Fort McCoy, Wisconsin. The omission of the kitchen was an authorized modification. A drawing caption states "When building is to be erected as Officers Quarters without mess, omit kitchen extension and finish end of building similar to opposite end except install typical window in place of heater room door. Provide mess tables in Mess Hall for recreation purposes."

11. Real Property Records box, building 2145, "Meatlocker," Fort McCoy, Wisconsin.Real Property Records box, building 2145, "Meatlocker," Fort McCoy, Wisconsin.

12. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

13. Diane Wasch and Perry Busch, (draft) History of the Design and Construction of Temporary World War II Buildings by the War Department. Historic American Buildings Survey, National Park Service, Washington, D.C. 1988, pp. 42, 47.

14. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

15. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy nd., ca. 1985, p. 6.

16. Unmarked wooden File Box, building 2145, "Meatlocker", Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignee's.

17. Standard Plan 700-6150-11b in record Drawing file #79 in "As Built" Files, Building 2111, Fort McCoy, Wisconsin.

18. Standard Plan 700-1300 in record Drawing file #79 in "As Built" Files, Building 2111, Fort McCoy, Wisconsin.

19. Standard Plan 700-1254 in record Drawing file #79 in "As Built" Files, Building 2111, Fort McCoy, Wisconsin.

20. Box entitled "Equipment Records," building 2145 "Meatlocker," Fort McCoy, Wisconsin.

21. Real Property Records, Building 2160, Fort McCoy, Wisconsin. Also see Real Property Records box, building 2145 "Meatlocker," Fort McCoy, Wisconsin.

22. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-1863 (OFFICER QUARTERS) HABS NO. WI-308-G
[Camp McCoy, Building T-1863 (Officer Quarters)]
Sparta Vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-G-1 PERSPECTIVE VIEW OF EAST SIDE AND NORTH (REAR)

WI-308-G-2 PERSPECTIVE VIEW OF WEST SIDE NORTH (REAR)

WI-308-G-3 VIEW OF SOUTH (FRONT) ELEVATION

WI-308-G-4 PERSPECTIVE VIEW OF SOUTH (FRONT)

WI-308-G-5 PERSPECTIVE VIEW OF SOUTH (FRONT) AND EAST SIDE

WI-308-G-6 PERSPECTIVE VIEW OF NORTH (REAR) AND WEST SIDE

WI-308-G-7 PERSPECTIVE VIEW OF SOUTH (FRONT)

WI-308-G-8 DETAILED VIEW OF SOUTH (FRONT) EAVES

WI-308-G-9 INTERIOR VIEW OF CENTRAL CORRIDOR, LOOKING NORTH FROM SOUTH ENTRY

WI-308-G-10 INTERIOR VIEW OF CENTRAL STAIR HALL FROM WEST ENTRY

WI-308-G-11 INTERIOR VIEW OF BATHROOM

WI-308-G-12 INTERIOR VIEW OF DAYROOM

BUILDING T-1146

CHAPEL

Figure 75. Perspective view of west (front) and north side.

Figure 76. Interior view of entrance from sanctuary.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-1146 (CHAPEL)
[Camp McCoy, Building T-1146 (Chapel)]
HABS NO. WI 308-H

Location: Building T-1146 is located approximately 50' north-northeast of South Eleventh Avenue, and 500' west-northwest of East S Street, in Block 11 of the cantonment of the Main Post of Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

USGS Quadrangle Alderwood Lake, Wisconsin; 7.5 minute series 1983 (photorevised from 1978) UTM Coordinates: Zone 15: 4876280 N 686760 E

Present Owner: Department of the Army

Original Use: Regimental Chapel

Present Use: Unused

Significance: Building T-1146 is significant as a relatively unmodified representative of a unit chapel. It represents one of eleven, type CH-1 chapels constructed at Fort MCoy in 1942.[2] Of these, the majority hav undergone minor and major alterations.[3]

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1146 probably began in the summer of 1942. There is a minor discrepancy on the date of building completion. Notations on the "As Built" drawing 800-550 state that the building was completed by 5 September 1942.[4] However the Real Property Records on file in Buildings T-2160 and T-2145 and note the building as completed on 19 September 1942.[5]

2. Architect: George E. Bergstrom, Chief of the Architectural Unit in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 1941 revision of the 700-1801 chapel plans that produced the 800-550 series drawings in April 1941.[6]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[7] The owner from 1942-47 was the War Department. Since 1947, the U.S. Department of the Army, the successor to the War Department has held title.

4. Builder, contractor, suppliers: Building T-1146 was part of construction area B at Fort McCoy. Bids for the construction of the cantonment were let in February

1942 and contracts were awarded in late March. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building T-1146 and the rest of the cantonment in the spring of 1942. The remaining materials used in construction were apparently purchased by subcontractors in the Wisconsin area.[8]

5. Original Plans and Construction: Building T-1146 was built from 800 series plan number 800-550 and associated plan numbers 800-550.1, 800-550.2, 800-551, 800-553, 800-554, 800-555, 800-556, 800-557, 800-558, 800-559, 800-560, 800-194, 800-197, and 800-199.[9] The original plans used to construct the eleven CH-1 regimental chapels at the installation are currently on file in "As Built" envelope #54 in Building T-2111. The original cost of the building was $29,990.[10] Alterations to the original building plan at the time of construction are noted in red on the "As Built" plans. These include square piers (round piers were commonly used at McCoy), the use of a metal frame for the toilet mirror (hardwood specified in plan), and the use of a joined 2" x 4" plank to replace the standard 4" x 10" purlin in the balcony. The optional laminated arch (plan 800-558) was omitted.[11]

6. Alterations and additions: On the exterior, the grayish white cement asbestos siding has been replaced in a few spots at low elevations with white siding of similar size and wavy texture. The exterior of the structure has been repainted on three separate occasions in 1951, 1959 and 1965. The interior was repainted in 1951.[12] The building was re-roofed with red asphalt shingles at an undocumented date. Carpet was added to the interior rooms and center of the sanctuary, also at an unknown date.

B. Historical Context:

The construction of Building T-1146 was part of a massive nation-wide mobilization program designed to build cantonments in which to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood frame buildings such as T-1146, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of mobilization buildings.

Building T-1146 was one of eleven regimental chapels constructed in the main cantonment area of the "New Camp McCoy," a mobilization cantonment built by the War Department between the entrance of the United States into World War II late in 1941 and early 1943.[13] The 1941-43 cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.[14]

Two newly organized Army Divisions occupied Camp McCoy during their training. The Second Army Division arrived soon after the completion of construction in the fall of 1942 and remained until November 1943, leaving for action in the Italian Campaign. The 76th Division then took over, remaining until December 1944, when they departed for service in the Battle of the Bulge and the subsequent occupation of Germany. Additionally, engineer, railhead, field artillery, tank destroyer, ordnance, and maintenance troops were trained at Camp McCoy concurrently with the Second and 76th Divisions.[15] In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year the personnel center began also to discharge veterans as the war came to a close. The personnel center closed in 1946, and most other functions of the camp halted a year later.[16]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of Regular, Reserve, and National Guard Units in the Fifth Army Area for service in the Korean War. Since 1953 the camp has become a center for training reserve units of the Army and National Guard Regiments of the Midwest Region.[17]

No data were available on occupants of Building T-1146 prior to 1964 when it was assigned to the 102 Division.[18] The building was assigned to the Office of Employment Opportunity from December 1965 to May 1968.[19]

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1146 is a well preserved relatively unmodified example of the typical 800 series regimental chapel. On the basis of visual inspection and historical documentation, Building T-1146 appears to be the best preserved and least altered of the remaining chapels at Fort McCoy.

2. Condition of Fabric: The general condition of Building T-1146 is good. Deterioration areas noted in the structure's exterior include areas where the original cement asbestos siding has fallen off and been replaced. No significant deterioration was noted in the structure's interior.

B. Description of the Exterior:

1. Overall Dimensions: Building T-1146 is rectangular in shape and measures approximately 83'-3" in length and 37' in width. The boiler room projects an additional 14'-4" along the longitudinal axis from the rear of the nave and is approximately 19' in width. The vestibule, centered longitudinally, projects approximately 2' from the face of the front wall. The height from grade to the roof ridge is approximately 21'-3". The steeple and lightning rod rise an approximate 29' above the roof ridge.[20]

FORT McCOY, BUILDING T-1146, (CHAPEL)
[Camp McCoy, Building T-1146 (Chapel)]
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2. Foundations: Building T-1146 varies from the original plan in that it uses concrete block instead of poured concrete as its exterior foundation. It rests on 14" x 10" deep concrete strip footings set at approximately 2'-6" below grade. Four exterior piers on each side of the nave break the continuity of the strip footing. Serving to tranfer roof loads from the trusses, they are spaced approximately 11'-6" o.c. starting at a point 23'-5" from the front wall of the chapel. To support the floor, two rows of concrete piers divide the lateral width approximately into thirds. They are spaced at approximately 8' o.c. from the rear wall of the nave. If constructed per plan 800-555, the typical interior piers measure 9" x 12", rest on a 2'-6" x 2'-6" x 1'-0" deep concrete pad and are reinforced with four 5/8" diameter reinforcing bars. There is no cellar excavation. This was not confirmed in the field as the crawl space is blocked with concrete block foundation wall.

3. Walls: The exterior walls of Building T-1146 consist of three layers over wood studs: wooden sheathing, black construction paper, and cement asbestos siding measuring 11" x 24", the standard size used throughout the cantonment.

4. Structural System, framing: Building T-1146 uses light frame construction. The roof is supported by a pair of stepped scissor trusses spaced at 11'-6" o.c., symmetrical about the longitudinal axis of the nave and set at a 6.5 to 12 slope. Two 3" x 8" members compose the top chord and two 3" x 6" members compose the bottom. The trusses are designed such that the web members align exactly to the vertical and horizontal directions. Each side of the truss is divided into three panels separated by vertical web members placed at 6'-0" horizontally. Each vertical web member is a single plank sized at 3" x 6". The horizontal web member is composed of two 3" x 6" planks which are joined to truss chords through the use of a 3" wood fill plate. Typical connections of the chords to the web members are made with 4" shear plates and 3/4" diameter bolts. The purlins are made of 4" x 10" wood members and are connected to the truss via the extension of the vertical web member through the top edge of the top chord. 2" x 8" tongue and groove planking, placed at a 45 degree angle to the direction of the trusses, is used for the roof deck. The loads from a typical truss are transferred to the foundation with three 3" x 14" planks. The planks form the outermost vertical web member of the truss.

5. Porches stoops: The record drawing version of the standard plan for Building T-1146 shows wooden steps at the front and rear of the structure. However, the building, like all 1942 cantonment buildings at McCoy has poured concrete steps with cast iron railings. There are three risers for both the front and the rear steps.

6. Chimneys: The chimney is located within the boiler room and rises approximately 24' above grade. The chimney is constructed of red brick in a running bond with Portland cement mortar. When in use the chimney served as exhaust for the fumes emitted from the coal-burning furnace.[21]

7. Openings:

a. Doorways and Doors: At the rear of the building a six-light double-recessed panel door was used at the single rear entry to the chapel. A four-light three-panel door is present on the entry to the boiler room. The front double-door entrance consist of two three-paneled doors with no lights. No notes on door specifications for CH-1 chapels were available in the "As Built" files in Building 2111.

b. Windows: Front: There are two six-over-six-light double-hung sash windows with simple architrave placed symmetrically about the longitudinal axis. Rear: There are two six-over-six-light double-hung sash windows with simple architrave placed symmetrically on either side of the boiler room. Right side: There is one six-light louvered window at the balcony, one six-over-six-light double-hung sash window with simple architrave in the consultation room, five sixteen-over-sixteen-light double-hung sash windows in the nave with yellow stained-glass on each side and one, six-over-six-light double-hung sash window with simple architrave in the chaplains office. Left side: The left side is identical to the right in terms of placement, size and type. However, the window corresponding to the consultation room on the right does not appear on the left. Boiler room: There is one, six-over-six-light double-hung sash window with simple architrave at the left and right walls.

C. Description of the Interior:

1. Floor Plans:

a. Basement: There is no basement under Building T-1146. The crawl space is at grade.

b. Main Floor: Building T-1146, as constructed in 1942 had a total square footage of 3,748. There are fifteen rooms in the building; the covered entry, the balcony, the vestibule, the cloak room with a water closet, the consultation room, the nave, the sanctuary, two chaplains offices, the water closet, the boiler room, two closets and a passage. The ceiling below the balcony floor is approximately 9'-7" in height and the ceiling in the sanctuary extends to approximately 18'-8".

2. Stairways: There is a two-flight, L-shaped seven-step stairway leading from the cloak room to the balcony. It is 3'-2" wide and is constructed of wood. The wood rail is made from 4" x 4" vertical members and 2" x 4" diagonal members.

3. Flooring: The structure has hardwood floors. The flooring has been covered with carpet in most rooms, the center nave and front of the sanctuary.

FORT McCOY, BUILDING T-1146, (CHAPEL)
[Camp McCoy, Building T-1146 (Chapel)]
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4. Wall and Ceiling finishes: The wood wainscotting, trim, ceiling and ceiling trusses in the structure's interior have been stained or varnished. All wall board surfaces in the interior have been painted white.

5. Openings: The interior double door entrance to the nave consists of two three-paneled doors. All other openings are single three-paneled doors. No notes on door specifications for CH-1 chapels were available in the "As Built" files in Building 2111,

6. Decorative Trim: Vertical wood wainscotting covers all interior walls of sanctuary. All doorways and moldings in the structure are made of simple square trim.

7. Hardware: The original galvanized metal knobs and rim locks survive on all exterior and interior doors. The original hardware on all of the double-hung windows also remains. Interior and exterior lighting fixtures are the same as those specified in building plan 800-560. All pews, chairs, and the kneeler in the structure conform to the specifications in plan 800-550.2.

8. Mechanical Equipment:

   a. Heating: The structure was heated with a "No. 3 Redflash" coal-fired steam boiler located at the rear. Seven steam radiators were located in various smaller rooms throughout the chapel. The sanctuary was heated with two large "Unit Heaters" suspended from the ceiling truss.

   b. Ventilation: The structure is vented through two fixed wooden louvers, in the church steeple.

   c. Lighting: All interior and exterior lighting appears to conform to the specifications in plan 800-560. The front entry is lighted by a four-sided iron 400-watt fixture suspended over the steps. The sanctuary is lighted with twelve "type-1", four 100-watt bulb fixtures, suspended on chain from the ceiling trusses. All other rooms are lighted with 50-, 100-, and 150-watt 8" diameter fixtures with porcelain enameled reflector bowls.

   d. Plumbing: The original cast-iron plumbing fixtures remain in both toilet rooms. The steam radiators and unit heaters also date to the period of construction.

9. Original Furnishings: All pews, chairs, and the kneeler in the structure conform to the specifications in plan 800-550.2 and date to the period of construction.

D. Site:

1. General Setting and orientation: Building T-1146 and the street layout and other buildings of Block 11 are arranged on a rectangular pattern running generally south-southwest to north-northeast along its long axis. The building is north and across Eleventh Avenue from the main barracks area. Building T-1146 is located approximately 50' north-northeast of Eleventh Avenue and faces the street.

2. Historical Landscape Design: To the east and rear of the building there is an asphalt parking lot. A poured concrete sidewalk is located between the building and Eleventh Avenue, an asphalt road. The remainder of the building lot is relatively flat and planted in grass.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building 1146 was built from 800 series plan number 800-550 and associated plan numbers 800-550.1, 800-550.2, 800-551, 800-553, 800-555, 800-556, 800-557, 800-559, 800-560, 800-194, 800-197, and 800-199. The original plans used to construct the eleven regimental chapels are currently on file in "As Built" envelope #54 in Building 2111.

B. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 800 Series Plan number 800-550, 800-550.1,800-551.2, 800-552, 800-553, 800-554, 800-555, 800-556, 800-557, 8000-558, 800-559, 800-560, 800-194, 800-197, and 800-199.

b. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project -- General Layout Plan No. 6150-L, May 23, 1942.

c. Record Drawing file #54 in "As Built Files, Building T-2111, Fort McCoy, Wisconsin.

d. Real Property Record. Building and Structures, Building T-2145, Fort McCoy, Wisconsin.

2. Secondary and Published sources:

"As Built" file # 54, Building T-2111, Fort McCoy, Wisconsin.

FORT McCOY, BUILDING T-1146, (CHAPEL)
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Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

"Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States.*(volume in the series, *United States Army in World War II: The Technical Services*) (Washington, D.C.: Office of the Chief of Military History, United States Army).

Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942, Original blueline print in map file cabinet Building T-2145 "Meatlocker," Fort McCoy, Wisconsin.

Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building T-2145 "Meatlocker", Fort McCoy, Wisconsin.

Real property records file; Building T-2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building T-2145 "Meatlocker," Fort McCoy, Wisconsin.

"To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

Unmarked wooden File Box, Building T-2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

C. Likely Sources Not Investigated:

1. Documentary: Information of the firm charged with the construction of Building T-1146 may be available. Additional data may be available in the National Archives on George E. Bergstrom and the other architects who produced and revised the 800 series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction of the chapels at Fort McCoy and the military archives could be searched for chaplain's records.

D. Supplemental Materials:

The original "As Built" drawings for Building T-1146 are filed in Building T-2111, at Fort McCoy, Wisconsin. They could not be duplicated and as such could not be included with this documentation. Standard plans for the 800 series CH-1 Chapel are available from the National Archives.

Prepared by: James A. Glass Ph.D.
Field Supervisor
HABS Phase - Fort McCoy Project
September 1988

and

Keith Landreth, Richard Hayes
Associate Investigators
CERL Phase - Fort McCoy Project
December 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

FORT McCOY, BUILDING T-1146, (CHAPEL)
[Camp McCoy, Building T-1146 (Chapel)]
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NOTES:

1. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

2. Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

3. "As Built" file 0 54, Building 2111, Fort McCoy, Wisconsin.

4. Completion label appended to Record Drawing # 800-550. "As Built" envelope #54, Building 2111, Fort McCoy, Wisconsin. All eleven (11) CH-1 structures at Fort McCoy were built according to this record plan.

5. Real property records file; Building 2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

6. Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States* [volume in the series, *United States Army in World War II: The Technical Services*] (Washington, D.C.: Office of the Chief of Military History, United States Army), pp. 349.

7. "To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

8. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet building 2145 "Meatlocker."

9. "As Built" file #54, Building 2111, Fort McCoy, Wisconsin.

10. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

11. "As Built" file #54, Building 2111, Fort McCoy, Wisconsin.

12. Real Property Records, Building 2160, Fort McCoy, Wisconsin. Also see Real Property Records box, building 2145 "Meatlocker," Fort McCoy, Wisconsin.

13. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

14. Diane Wasch and Perry Busch, (draft) History of the Design and Construction of Temporary World War II Buildings by the War Department. Historic American Buildings Survey, National Park Service, Washington, D.C., 1988, pp. 42, 47.

15. "Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

16. Ibid.

17. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

FORT McCOY, BUILDING T-1146 (CHAPEL)
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18. Unmarked wooden File Box, building 2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

19. "Real Property Records, Building 2160, Fort McCoy, Wisconsin. Also see Real Property Records box, building 2145 "Meatlocker," Fort McCoy, Wisconsin.

20. Real Property Record Building 1046 ; Real property records office, Building 2160 Fort McCoy, Wisconsin.

21. Standard Plan 800-559.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-1146 (CHAPEL) HABS NO. WI-308-H
[Camp McCoy, Building T-1146 (Chapel)]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-H-1 GENERAL VIEW OF WEST (FRONT)

WI-308-H-2 PERSPECTIVE VIEW OF WEST (FRONT) AND SOUTH SIDE

WI-308-H-3 PERSPECTIVE VIEW OF WEST (FRONT) AND NORTH SIDE

WI-308-H-4 CLOSER PERSPECTIVE VIEW OF WEST (FRONT)

WI-308-H-5 VIEW OF SOUTH SIDE ELEVATION

WI-308-H-6 PERSPECTIVE VIEW OF NORTH (REAR) SHOWING CHIMNEY

WI-308-H-7 INTERIOR VIEW OF SANCTUARY FROM NORTH (REAR) GROUND LEVEL

WI-308-H-8 CLOSER INTERIOR VIEW OF SANCTUARY FROM NORTH (REAR) GROUND LEVEL

WI-308-H-9 INTERIOR VIEW OF ENTRANCE FROM SANCTUARY

WI-308-H-10 DETAILED INTERIOR VIEW OF TRUSSES

BUILDING T-1046

STANDARD WARD

Figure 77. Exterior view of front.

Figure 78. Interior view showing north wall from south.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-1046 (STANDARD WARD)
[Camp McCoy, Building T-1046 (Standard Ward)]
HABS NO. WI-308-I

Location: Building T-1046 is located approximately 250' northeast of South V Street and 50' southeast of South Tenth Avenue, in Block 10 of the cantonment of the Main Post of Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

USGS Quadrangle, Alderwood Lake, Wisconsin: 7.5 minute series 1983 (photorevised from 1978) UTM Coordinates: Zone 15: 4876200 N 686660 E.

Present Owner: Department of the Army.

Original Use: Standard 33-bed Hospital Ward (Type W-1).

Present Use: Unused - does not appear to have reserve status.

Significance: Building T-1046 is significant as a relatively unmodified representative of a 33-bed hospital ward. It represents one of thirty Type W-1 buildings constructed at Fort McCoy in 1942.[2] Of these, eight were modified by the addition of kitchens in 1957 and eleven were rehabilitated into USAR School billets at a latter date.[3]

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-1046 probably began in the fall of 1942. There is a minor discrepancy between the available data for the date of building completion. Notations on the "As Built" drawing 700-462 state that the building was completed by October 19, 1942.[4] However, the Real Property Records on file in Buildings 2160 and 2145 note the building as completed on October 3, 1942.[5] "As Builts" were probably prepared by the contractor and the R.P.R. by the Army, perhaps upon acceptance from the contractor.

2. Architect: Col. Hugh J. Casey in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 1941 revision of the 700 series standardized drawings.[6]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[7] The owner from 1942-47 was the War Department. Since 1947, the U.S. Department of the Army, the successor to the War Department, has held title.

4. Builder, contractor, suppliers: Building T-1046 was part of construction area A, which was built by J. P. Cullen & Sons of Janesville, WI. Bids for the construction of the cantonment were let in February 1942 and contracts were awarded in late March. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building T-1046 and the rest of the cantonment in the spring of 1942. The remaining materials used in construction were apparently purchased by subcontractors in the Wisconsin area.[8]

5. Original Plans and Construction: Building T-1046 was built from 700 series plan number 700-462 and associated plan numbers 700-225, 700-226, 700-231, 700-244, 700-245, 700-246, 700-262.1, 700-1162, 800-194, 800-197, and 800-199. Drawing 700-247 was listed in the original Construction Specification but was not found with the other drawings.[9] The original plans used to construct the thirty W-1 hospital wards are currently on file in "As Built" envelope #105 in Building T-2111. The original cost of the building was $22,132.[10] Alterations to the original building plan at the time of construction are noted in red on the "As Built" plan. These include the use of 1-3/8" thick, double-panel glazed doors at the rear, front and porch entrances, asphalt roofing shingles, cement asbestos siding shingles, the omission of knee braces from the solarium partition, utility room, lavatory and toilet, the installation of a prefabricated shower. The wall board and wainscot were omitted from the covered walks, seventeen wall footings were changed to 2'-0" x 2'-0" x 1'-0", and the concrete piers were changed from a specified 10" to 12" diameters. Additionally the low and high pressure reducing valves connecting the central heating system to the ward were relocated from the covered walkway to the interior walls in the Ward office and isolation ward.[11]

6. Alterations and additions: On the exterior, the grayish white cement asbestos siding has been replaced in a few spots at low elevations with white siding of similar size and texture. The structure has been repainted on three separate occasions in 1951, 1959 and 1964. Additionally in 1964 the building was re-roofed with red asphalt shingles. A walkway was added to the building in 1968 at a cost of $4,000.[12]

B. Historical Context:

The construction of Building T-1046 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as Building T-1046, the 1939 housing capacity of 200,000 was increased to 6,000,000 by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

FORT McCOY, BUILDING T-1046 (STANDARD WARD)
[Camp McCoy, Building T-1046 (Standard Ward)]
HABS NO. WI-308-I (page 3)

Building T-1046 was one of thirty 33-bed hospital wards constructed in the hospital area of the "New Camp McCoy," a mobilization cantonment built by the War Department between the entrance of the United States into World War II in late 1941 and early 1943.[13] The 1941-43 cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.[14] Two newly organized Army Divisions occupied Camp McCoy during their training. The Second Army Division arrived soon after the completion of construction in the fall of 1942 and remained until November 1943, leaving for action in the Italian Campaign. The 76th Division then took over, remaining until December 1944, when they departed for service in the Battle of the Bulge and the subsequent occupation of Germany. Engineer, railhead, field artillery, tank destroyer, ordnance, and maintenance troops were trained at Camp McCoy concurrently with the Second and 76th Divisions.[15] In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year the personnel center began also to discharge veterans as the war came to a close. The personnel center closed in 1946, and most other functions of the camp halted a year later.[16]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of regular, reserve, and National Guard Units in the Fifth Army Area for service in the Korean War. Since 1953 the camp has become a center for training reserve units of the Army and National Guard Regiments of the Midwest Region.[17]

No data was available on occupants of Building T-1046 prior to 1968 when it was assigned to the 452th General Hospital.[18]

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-1046 is a well preserved, relatively unmodified example of the typical 700 series 33-bed hospital ward. On the basis of visual inspection and historical documentation, Building T-1046 appears to be the best preserved of the remaining, unaltered eleven W-1 wards at Fort McCoy.

2. Condition of Fabric: The general condition of Building T-1046 is good. Deterioration areas noted in the structure's exterior include areas where the original cement asbestos siding has fallen off and been replaced, some deterioration of the wooden foundation skirting, and peeling paint. Wood rot was noted along the eaves on the southwest wall. No significant deterioration was noted in the structure's interior.

FORT McCOY, BUILDING T-1046 (STANDARD WARD)
[Camp McCoy, Building T-1046 (Standard Ward)]
HABS NO. WI-308-I (page 4)

B. Description of the Exterior:

1. Overall Dimensions: Building T-1046 is rectangular in shape and measures approximately 25'-4" in width and 150'-6" in length. The building is one story and the height from grade to the roof ridge is approximately 14'.[19]

2. Foundations: The foundation at building T-1046 consists of four rows of piers on concrete footings containing a total of sixty-four 12" concrete piers resting on 2'-0" x 2'-0" square x 1'-0" thick concrete footings. There is no cellar excavation. The crawl space below the ward is screened with wooden skirting composed of vertical boards affixed to the foundation girders and to sills fitted into slots in the exterior piers.

3. Walls: The exterior walls of Building T-1046 consist of three layers: wooden sheathing, black construction paper, and cement asbestos siding measuring 11" x 24", the standard size used throughout the cantonment.

4. Structural System, framing: The structure is a light wood frame.

5. Porches stoops: There is screened porch on the west wall. The porch has a concrete step entrance and painted hardwood floors.

6. Chimneys: Building T-1046 and other buildings in the block were connected to a central heating plant. There are no chimneys, heater rooms or furnaces directly connected to the building. There are three 16" diameter metal ventilators on the roof of the structure, one to the center, the others at intervals on either side.

7. Openings:

a. Doorways and Doors: Double doors, with four lights at the top and two recessed panels at the bottom, were used at the rear, front, and porch entrances. No notes on door specifications were available in the "As Built" files in Building 2111. Standard screen doors appear on the outside of all three building entrances. A screen door covers the entry into the screened porch.

b. Windows: The south wall has six, six-over-six-light double-hung sash windows opening to the solarium. The east and west walls have twenty, six-over-six-light double-hung sash windows. The north wall has four, eight-over-eight-light double-hung sash windows. All windows have a simple architrave surround, and plain wood-framed screens.

C. Description of the Interior:

1. Floor Plans:

FORT McCOY, BUILDING T-1046 (STANDARD WARD)
[Camp McCoy, Building T-1046 (Standard Ward)]
HABS NO. WI-308-I (page 5)

a. Basement: There is no basement under Building T-1046. The crawl space is at grade.

b. Main Floor: Building T-1046, as constructed in 1942, had total square footage of 3,813. There are thirteen rooms in the building; the covered porch, the main ward, two small one-man wards, a ward office, a serving kitchen, a closet, linen room, utility room, lavatory, toilet, solarium, and the main corridor. The main ward measures 95'-6" x 25'-4". Ceilings are approximately 9'-10-1/2" in height.

c. Attic: The attic above the main floor contains standard mobilization trusses with knee braces at the perimeter wall.

2. Stairways: There are no interior or exterior stairways.

3. Flooring: The structure has hardwood floors in all rooms except the toilets, lavatory and serving kitchen rooms which have concrete flooring.

4. Wall and Ceiling Finishes: The walls and ceiling are painted. The top of the walls and ceiling is fiber board and the lower half of the wall is surfaced nail board.

5. Openings: The original five-panel recessed doors are present in all rooms.

6. Decorative Trim: Horizontal wood wainscotting covers all interior walls of the main ward, corridors and lavatories. All doorways and moldings in the structure are made of simple square trim.

7. Hardware: The original building equipment report for Building T-1046 lists the following hardware: six toilets, two steel sinks, eleven lavatories, one drinking fountain, one enamel sink, one shower, six paper holders, five mirrors, one ladder, and four soap dishes.[20] The original galvanized metal knobs and rim locks survive on all three of the exterior and interior doors. The original hardware on all of the double-hung sash windows also remains.

8. Mechanical Equipment:

a. Heating: There are no chimneys, heater rooms or furnaces directly connected to the building. The building was connected to a central heat facility. Room heat was provided via steam radiators located at the perimeter of the rooms beneath the windows.

c. Ventilation: There are nine staggered 8" x 10" screen openings in the ceiling of the main ward and one in the solarium.

d. Lighting: The original 60- and 100-watt fixtures with porcelain enameled bowls remain.

e. Plumbing: The original plumbing in the toilets and lavatories has been retained and remains in good condition.

9. Original Furnishings: None noted. The beds, office and clinical furniture have been removed. However, racks constructed over each bed for personnel effects and bedding have been retained.

D. Site:

1. General Setting and orientation: Building T-1046, the street layout and other buildings of Block 10 (Hospital Area) are arranged on a rectangular pattern running generally southwest to northeast along its main axis. The building is central in a set of five similar structures. Building T-1046 is located approximately 250' northeast of South V Street and 50' southeast of South Tenth Avenue.[21] The long axes of the building parallel South V Street and the short axis parallels South Tenth Avenue. A covered walkway connects all five structures along the northwest edge of the block. Block 10 was located to the east of the main cantonment in such a manner as to be shielded from vehicle traffic noise and artillery and small arms firing areas.

2. Historical Landscape Design: Two native trees have been planted to the east side. The remainder of the building lot is planted in grass. A small two-track gravel service drive is located to the immediate north.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-1046 was built from 700 series plan number 700-462, and associated plan numbers 700-225, 700-226, 700-231, 700-244, 700-245, 700-246, 700-262.1, 700-1162, 800-194, 800-197, and 800-199. Drawing 700-247 was listed in the original Construction Specification but was not found with the other drawings. The original plans used to construct the thirty W-1 hospital wards are currently on file in "As Built" envelope #105 in Building T-2111.

B. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 700 and 800 Series Plan number 700-462*, 700-225, 700-226, 700-231, 700-244, 700-245, 700-246, 700-462.1*, 700-1162, 800-194, 800-197, and 800-199.
(* These drawings were modified at Ft. McCoy).

FORT McCOY, BUILDING T-1046 (STANDARD WARD)
[Camp McCoy, Building T-1046 (Standard Ward)]
HABS NO. WI-308-I (page 7)

b. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project -- General Layout," Plan No. 6150-L, May 23, 1942.

c. Record Drawing file 0105 in As Built Files, Building T-2111, Fort McCoy, Wisconsin.

d. Real Property Record. Building and Structures, Building T-2145, Fort McCoy, Wisconsin.

2. Secondary and Published sources:

Basic Information Map, Fort McCoy, Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg T-2160. Original January -11-1965; Revision #11 June-4-1976.

Buildings and Structures Descriptions, from box marked "Save Historical"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

"Historical Summary," typescript summary of the history of camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States*. [volume in the series, *United States Army in World War II: The Technical Services*] Washington, D.C.: Office of the Chief of Military History, United States Army.

Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout," Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet Building T-2145 "Meatlocker."

Post Engineer Office Historical Data, Document dated 15 January 1946, on file Building T-2145 "Meatlocker," Fort McCoy, Wisconsin.

Real property records file; Building T-2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building T-2145 "Meatlocker," Fort McCoy, Wisconsin.

"To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

Unmarked wooden File Box, Building T-2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

FORT McCOY, BUILDING T-1046 (STANDARD WARD)
[Camp McCoy, Building T-1046 (Standard Ward)]
HABS NO. WI-308-I (page 8)

C. Likely Sources Not Investigated:

1. Documentary: Information of the firm of J. P. Cullen & Sons charged with the construction of Building T-1046 maybe available. Additional data may be available in the National Archives on Hugh J. Casey and the other architects who produced and revised the 700 series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction of the hospital area at Fort McCoy and the military archives could be searched for personnel stationed at or treated at the hospital during WWII.

D. Supplemental Materials:

1. The original "As Built" drawings for Building T-1046 are filed in Building T-2111, at Fort McCoy, Wisconsin. They were too fragile to copy and as such could not be included with the documentation. Standard plans for the 700 series 33-bed ward are available from the National Archives.

Prepared by: James A. Glass Ph.D.
Field Supervisor
HABS Phase - Fort McCoy Project
September 1988

and

Keith Landreth, Richard Hayes
Associate Investigators
CERL Phase - Fort McCoy Project
December 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. Large-format photography, by Martin Stupich.

FORT McCOY, BUILDING T-1046, (STANDARD WARD)
[Camp McCoy, Building T-1046 (Standard Ward)]
HABS NO. WI-308-I (page 9)

NOTES:

1. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

2. Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

3. "As Built" file 0 105, Building 2111, Fort McCoy, Wisconsin.

4. Completion label appended to Record Drawing d 700-462. "As Built" envelope 0105, Building 2111, Fort McCoy, Wisconsin. All thirty (30) W-1 structures at Fort McCoy were built according to this record plan.

5. Real property records file; Building 2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

6. Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States*. [volume in the series, *United States Army in World War II: The Technical Services*] (Washington, D.C.: Office of the Chief of Military History, United States Army), p. 349.

7. "To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p.1, c. 8.

8. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout," Plan No. 6150-1-L, May 23, 1942. Original blueline print in map file cabinet building 2145 "Meatlocker."

9. "As Built" file #105, Building 2111, Fort McCoy, Wisconsin.

10. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

11. "As Built" file #105, Building 2111, Fort McCoy, Wisconsin.

12. Real Property Records, Building 2160, Fort McCoy, Wisconsin. Also see Real Property Records box, building 2145 "Meatlocker," Fort McCoy, Wisconsin.

13. Post Engineer Office Historical Data, Document dated 15 January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

14. Perry Busch and Diane Wasch, "The Historical Context of World War II Mobilization Construction." Unpublished paper. Historic American Buildings Survey, National Park Service, Washington, D.C. 1988, pp. 42;47

15. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker", Fort McCoy, Wisconsin.

16. Ibid.

17. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

18. Unmarked wooden File Box, building 2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4 x 5 cards listing buildings and assignees.

19. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

20. "As Built" file #105, Building 2111, Fort McCoy, Wisconsin.

21. Basic Information map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-1046 (STANDARD WARD) HABS NO. WI-308-I
[Camp McCoy, Building T-1046 (Standard Ward)]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-I-1 GENERAL PERSPECTIVE VIEW OF HOSPITAL COMPLEX, STANDARD WARDS

WI-308-I-2 PERSPECTIVE VIEW OF STANDARD WARD

WI-308-I-3 VIEW OF FRONT ENTRY OF STANDARD WARD

WI-308-I-4 SIDE WALL OF STANDARD WARD, SHOWING SCREENED PORCH

WI-308-I-5 PERSPECTIVE VIEW OF CONNECTING WING

WI-308-I-6 VIEW OF ENTRY OF CONNECTING WING

WI-308-I-7 INTERIOR VIEW OF WARD SHOWING NORTH WALL FROM SOUTH

WI-308-I-8 INTERIOR VIEW OF WARD SHOWING SOUTH WALL FROM NORTH

WI-308-I-9 INTERIOR VIEW OF SOLARIUM, SOUTH END OF WARD

WI-308-I-10 INTERIOR VIEW OF WARD CORRIDOR, LOOKING SOUTH

WI-308-I-11 INTERIOR VIEW OF KITCHEN

WI-308-I-12 INTERIOR VIEW OF NURSES' OFFICE

BUILDING T-2000

SERVICE CLUB

Figure 79. Perspective view of south (front) and east side.

Figure 80. Interior view of dayroom.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-2000 (SERVICE CLUB)
[Camp McCoy, Building T-2000 (Service Club)]
HABS NO. WI-308-J

Location: Building T-2000 is located approximately 200' northeast of South Eleventh Avenue, in Block 20 of the cantonment of the Main Post of Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

USGS Quadrangle Alderwood Lake, Wisconsin; 7.5 minute series 1983 (photorevised from 1978) UTM Coordinates: Zone 15: 4876690 N 684040 E)

Present Owner: Department of the Army.

Original Use: Service Club Type SC-3.

Present Use: Service Club.

Significance: Building T-2000 is significant as a relatively unmodified representative of a service club. It represents one of two 800 series SC-3 structures constructed at Fort McCoy in 1942. The other, Building 905, was extensively modified after a fire.[2]

PART I. HISTORICAL INFORMATION:

A. Physical History:

1. Date of erection: Construction of Building T-2000 probably began in the summer/fall of 1942. Notations on the "As Built" drawing 800-517 state that the building was completed by 5 November 1942.[3]

2. Architect: George E. Bergstrom, Chief of the Architectural Unit in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 1941 revision of the 700 series service club plans that produced the 800-517 series drawings in April 1941.[4]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[5] The owner from 1942-47 was the War Department. Since 1947, the U.S. Department of the Army, the successor to the War Department, has held title.

4. Builder, contractor, suppliers: Building T-2000 was part of construction area D at Fort McCoy. Bids for the construction of the cantonment were let in February 1942 and contracts were awarded in late March. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building T-2000 and the rest of the cantonment in the spring of 1942. The remaining materials used in construction were apparently purchased by subcontractors in the Wisconsin area.[6]

5. Original Plans and Construction: Building T-2000 was built from 800 series plan number 800-517 and associated plan numbers 800-518, 800-519, 800-520, 800-521, 800-522, 800-523, 800-524, 800-525, 800-526, 800-527, 800-527.1, 800-528, 800-528.1, 800-529, 800-529.1, 800-147, 800-151, 800-154, 800-157, 800-176, 800-177, 800-179, 800-180, 800-182, 800-185, 800-186, 800-187, 800-190, 800-194, 800-197, 800-199, and 800-814.[7] The original plans used to construct Building T-2000 are currently on file in "As Built" envelope #165 in Building 2111. The cost of the building was $82,689.[8] Noted alterations to the original building plan at the time of construction include the use of concrete blocks instead of poured concrete to form the walls in the boiler room, and the use of square brick piers instead of round concrete piers for the foundation.[9]

6. Alterations and additions: Alterations to the original plan, as noted above, include the use of concrete blocks in the boiler room and brick piers. Other noted alterations include the use of 3" x 10" at 16" centers instead of 3" x 12" at 2'-0" centers in the kitchen.[10] The following changes have been made to the structure since construction. A 38'-0" x 22'-0" addition was made to the west wing and a 10'-0" x 32'-0" telephone room added in 1943. The back porch was enclosed, the interior painted, and 3,543 feet square of checkerboard floor tile was installed in 1951. The men's latrine and upstairs conference room were repainted in 1955. The exterior was repainted in 1958 and 1964 and the structure was re-roofed in 1959. A restroom was divided in 1981 to provide two restrooms.[11] On the exterior, the grayish white cement asbestos siding has been replaced in many areas with white and dark gray siding, a modern metal door has been placed in the cafe entrance, and a large air-conditioning unit have been installed at various unknown dates.

B. Historical Context:

The construction of Building T-2000 was part of a massive, nation-wide mobilization program designed to build cantonments to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as T-2000, the 1939 housing capacity of 200,000 was increased to 6,000,000 persons by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction

were largely developed in the construction of these mobilization structures.

Building T-2000 was one of two SC-3 Service clubs constructed in the main cantonment area of the "New Camp McCoy", a mobilization cantonment built by the War Department between the entrance of the United States into World War II late in 1941 and early 1943.[12] The 1941-43 cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.[13] Two newly organized Army Divisions occupied Camp McCoy during their training. The Second Army Division arrived soon after the completion of construction in the fall of 1942 and remained until November 1943, leaving for action in the Italian Campaign. The 76th Division then took over, remaining until December 1944, when they departed for service in the Battle of the Bulge and the subsequent occupation of Germany. Additionally, engineer, railhead, field artillery, tank destroyer, ordnance, and maintenance troops were trained at Camp McCoy concurrently with the Second and 76th Divisions.[14] In 1944, Camp McCoy also became a personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year the personnel center began also to discharge veterans as the war came to a close. The personnel center closed in 1946, and most other functions of the camp halted a year later.[15]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of Regular, Reserve, and National Guard Units in the Fifth Army Area for service in the Korean War. Since 1953 the camp has become a center for training reserve units of the Army and National Guard Regiments of the Midwest Region.[16]

Building T-2000 was assigned to Special Services from January 26, 1943, until September 26, 1963. No additional data on the building assignees or occupants were available.[17]

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-2000 is a well preserved relatively unmodified example of a typical 800 series, Service Club.

2. Condition of Fabric: The general condition of Building T-2000 is good. Areas of deterioration noted in the structure's exterior include places where the original cement asbestos siding has fallen off and been replaced. The exterior paint is peeling in some places and some warping and wood rot was observed where the end grains of beams have been exposed to moisture. The roof truss for the structure was repaired in 1975 for cracks in four of the twenty-one roof trusses. In all, five cracks in Truss Nos. 1, 2, 3 and 5 were repaired.[18]

FORT McCOY, BUILDING T-2000 (SERVICE CLUB)
[Camp McCoy, Building T-2000 (Service Club)]
HABS NO. WI-308-J (page 4)

Description of the Exterior:

1. Overall Dimensions: Building T-2000 is a T-shaped building with a main hall and two wings. The main structure measures 40'-0" x 199'-8" and the wings measure 70'-0" x 59'-8". The height from grade to the roof ridge is approximately 26'.[19]

2. Foundations: Building T-2000 has a concrete pier foundation with sixteen footings and concrete block skirting.

3. Walls: The exterior walls of Building T-2000 consist of three layers: wooden sheathing, black construction paper, and cement asbestos siding measuring 11" x 24", the standard size used throughout the cantonment.

4. Structural System, framing: The building has a light wood frame typically of 2" x 4" studs at 2'-0" o.c. The roof is supported with a pitched truss spaced at 10'-0" through all wings of the building. The trusses in turn are supported by columns generally composed of two 2" x 12" members.

5. Porches stoops: The structure has an enclosed porch on the west side that measures 59'-8" x 10'-0" and an open front porch with a canopy that measures 80'-0" x 10'-2".

6. Chimneys: The structure has two chimneys. One is an end wall chimney and is approximately 30' in height (4'-0" over the roof ridge). It is attached to the structure at the rear center elevation and has two fireplaces located on the first and second floor of the dance hall. The second chimney is located outside the boiler room and rises approximately 65' above grade. Both are constructed of red brick in a running bond with Portland cement mortar. When in use the first chimney is for recreational purposes. The second serves as exhaust for the fumes emitted from the coal burning furnace.

7. Openings:

   a. Doorways and Doors: At the south wall (entrance), there are two pairs of doors, side by side, with four-light three-panel doors. A modern, double aluminum-frame door is located at the entrance to the cafe. On the west wall there is a double, four-light three-panel door access to the boiler room. On the east wall there is an emergency stairway exit leading from the second-floor balcony. There are no entrances on the north wall.

   b. Windows: On the south front wall there are twenty-one, eight-over-eight-light double-hung sash windows and four, fixed eight-light windows. On the north rear, there are twelve, eight-over-eight-light double-hung sash windows and seven fixed eight-light windows. On the east side there are fourteen, eight-over-eight-light double-hung sash windows. On the west

side are twenty-three, eight-over-eight-light double-hung sash windows. The window pattern for the west side was modified after the side porch was enclosed. Office windows have metal security screening and all other windows have standard wire-mesh screens.

C. Description of the Interior:

1. Floor Plans:

a. Basement: There is no basement under Building T-2000.

b. Main Floor: Building T-2000, as constructed in 1942, had a total square footage of 18,791. There are eighteen rooms in the building. These include an office, a hostess office, a delivery office, a storage room, librarians' office, a library, a second-floor balcony with a lounge, a reading room, an entry with a cloak room, men's and ladies' toilets, the dance hall, a cafe, kitchen, kitchen stores, boiler room, and two porches.

c. Attic: There is no habitable space in the attic. The dance hall has an encircling balcony above which are the exposed trusses.

2. Stairways: There are four, fifteen-riser stairways in Building T-2000. These lead to the second-floor balcony and lounge and are located at the four corners of the dance hall.

3. Flooring: The flooring in the kitchen, toilets and boiler room is concrete. The remainder of the structure has hardwood floors. 3,543 feet square of checkerboard floor tile was installed in 1951 in the library, the second-floor balcony and the entry.

4. Wall and Ceiling finishes: The ceiling and walls are finished with masonite presswood and painted.

5. Openings: The original five-panel doors are present in all rooms.

6. Decorative Trim: All doorways and moldings in the structure are made of simple square trim.

7. Mechanical Equipment:

a. Heating: The structure is heated by a coal-fired steam boiler with an electric stoker. Heat is dissipated via unit heaters suspended from the ceiling trusses and steam radiators.[20]

b. Kitchen appliances: The original listing for kitchen equipment in building T-2000 includes a Sturtivant ventilation fan, a Trane heater unit, a Hobart food mixer, an electric potato peeler, a walk-in refrigerator, a reach-in refrigerator, an ice cube-making machine and a machine dishwasher.[21] None of the original kitchen equipment is present.

c. Ventilation: The building is vented through 12" metal gravity vents along the roof ridge and a 16" metal continuous ridge vent installed above the kitchen. Wooden louvers are also present on the north and west walls. There are also metal ventilators on the roof of the structure.

d. Lighting: Many of the original, porcelain enameled fixtures remain in the dance hall area. The lighting in the library has been replaced with fluorescent fixtures and globe fixtures.

D. Site:

1. General setting and orientation: Building T-2000 and the other buildings of Block 20 are located at the southwestern apex of the Fort McCoy "Triad" design. The building is located within a "semi-isolated" complex containing the base post office, a guest house and a theater.[22]

2. Historical Landscape Design: Directly south and north of the building are asphalt parking lots, and ornamental trees and shrubs. The remainder of the building lot is relatively flat and planted in grasses.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-2000 was built from 800 series plan number 800-517 and associated plans.

B. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 800 Series Plan numbers 800-517*, 800-518, 800-519*, 800-520, 800-521, 800-522, 800-523*, 800-524, 800-525, 800-526, 800-527, 800-527.1, 800-528, 800-528.1, 800-529*, 800-529.1, 800-147, 800-151, 800-154, 800-157, 800-176, 800-177, 800-179, 800-180, 800-182, 800-185, 800-186, 800-187, 800-190, 800-194, 800-197, 800-199, and 800-814. (* These drawings were modified at Ft. McCoy).

b. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project -- General Layout," Plan No. 6150-L, May 23, 1942.

c. Record Drawing file #165 in "As Built" Files, Building T-2111, Fort McCoy, Wisconsin.

d. Real Property Record. Building and Structures, Building T-2145, Fort McCoy, Wisconsin.

2. Secondary and Published sources:

"As Built" file N 165, Building T-2111, Fort McCoy, Wisconsin.

Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg. T-2160. Original January -11-1965; Revision #11 June-4-1976.

Buildings and Structures Descriptions, from box marked "Save Historical"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

Equipment Records, from file marked "Equipment Records"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

"Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States*. [volume in the series, *United States Army in World War II: The Technical Services*] Washington, D.C.: Office of the Chief of Military History, United States Army).

Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet Building T-2145 "Meatlocker."

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Real property records file; Building T-2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building T-2145 "Meatlocker", Fort McCoy, Wisconsin.

"To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

FORT McCOY, BUILDING T-2000 (SERVICE CLUB)
[Camp McCoy, Building T-2000 (Service Club)]
HABS NO. WI-308-J (page 8)

Unmarked wooden File Box, Building T-2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignee's.

C. Likely Sources Not Investigated:

1. Documentary: Information on the firm charged with the construction of Building T-2000 may be available. Additional data may be available in the National Archives on George E. Bergstrom and the other architects who produced and revised the 800 series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction of the Service Clubs at Fort McCoy and the military records and local area could be searched for personnel who may have worked at the club.

D. Supplemental Materials:

1. The original "As Built" drawings for Building T-2000 are filed in Building T-2111, at Fort McCoy, Wisconsin. Standard plans for the 800 series SC-3 are available from the National Archives.

Prepared by: James A. Glass Ph.D.
Field Supervisor
HABS Phase - Fort McCoy Project
September 1988

and

Keith Landreth, Richard Hayes
Associate Investigators
CERL Phase - Fort McCoy Project
December 1988

PART IV. PROJECT INFORMATION

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historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

NOTES:

1. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

2. Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

3. Completion label appended to Record Drawing d 800-517. "As Built" envelope #165, Building 2111, Fort McCoy, Wisconsin.

4. Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States* [volume in the series, *United States Army in World War II: The Technical Services*) (Washington, D.C.: Office of the Chief of Military History, United States Army), pp. 349.

5. "To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

6. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23, 1942. Original blueline print in map file cabinet building 2145 "Meatlocker."

7. "As Built" envelope #165, Building 2111, Fort McCoy, Wisconsin.

8. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

9. "As Built" envelope #165, Building 2111, Fort McCoy, Wisconsin.

10. Ibid.

11. Real Property Records, Buildings 2160 and 2145, Fort McCoy, Wisconsin.

12. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

13. Diane Wasch and Perry Busch, (draft) History of the Design and Construction of Temporary World War II Buildings by the War Department. Historic American Buildings Survey, National Park Service, Washington, D.C., 1988, pp. 42, 47.

14. Post Engineer Office Historical Data, Document dated 15 January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

15. Ibid.

16. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

17. Unmarked wooden File Box, building 2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

18. Drawing Number 47-018-568, Truss Repair Bldg. 2000. "As Built" file #196, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

19. From "Standard 700 Series Drawings 1155 to ----" in map file, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

20. "As Built" file #165, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

21. Box entitled "Equipment Records", building 2145 "Meatlocker," Fort McCoy, Wisconsin. Box entitled "Equipment Records", building 2145 "Meatlocker," Fort McCoy, Wisconsin.

22. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June 4, 1976.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

FORT McCOY, BUILDING T-2000 (SERVICE CLUB) HABS NO. WI-308-J
[Camp McCoy, Building T-2000 (Service Club)]
Sparta vicinity
Monroe County
Wisconsin

Martin Stupich, photographer; September, 1988

WI-308-J-1 GENERAL VIEW OF SOUTH (FRONT) AND EAST SIDE

WI-308-J-2 GENERAL VIEW OF NORTH (REAR) AND WEST SIDE

WI-308-J-3 GENERAL VIEW OF SOUTH (FRONT) ELEVATION

WI-308-J-4 VIEW OF SOUTH (FRONT) ELEVATION

WI-308-J-5 CLOSER VIEW OF SOUTH (FRONT) ELEVATION SHOWING FRONT PORCH

WI-308-J-6 PERSPECTIVE VIEW OF NORTH (REAR) AND WEST SIDE

WI-308-J-7 INTERIOR VIEW OF SOUTH AND WEST WALLS OF MAIN ROOM

WI-308-J-8 INTERIOR VIEW OF NORTH AND EAST WALLS OF MAIN ROOM

WI-308-J-9 INTERIOR VIEW OF LIBRARY FROM THE SOUTHEAST

WI-308-J-10 INTERIOR VIEW OF TRUSS IN MAIN ROOF SHOWING SKY LIGHT

WI-308-J-11 INTERIOR VIEW OF POOLROOM FROM WEST DOORWAY

WI-308-J-12 DETAILED VIEW OF MEZZANINE FIREPLACE, NORTH WALL

BUILDING T-100

POST ADMINISTRATION

Figure 81. Perspective view of south (front) and east side.

Figure 82. Interior view of main entrance.

HISTORIC AMERICAN BUILDINGS SURVEY

FORT McCOY, BUILDING T-100 (POST ADMINISTRATION)
[Camp McCoy, Building T-100 (Post Administration)]
HABS NO. WI-308-K

Location: Building T-100 is located approximately 200' due north of the intersection of East Headquarters Road, West Headquarters Road and South Headquarters Road in the center of the Fort McCoy "Triad," in Block 1 of the cantonment of the Main Post of Fort McCoy, Sparta vicinity, Monroe County, Wisconsin.[1]

USGS Quadrangle Alderwood Lake, Wisconsin; 7.5 minute series 1983 (photorevised from 1978) UTM Coordinates: Zone 15: 4877100 N, 685380 E

Present Owner: Department of the Army

Original Use: Headquarters Building Type DHQ-l

Present Use: Post Headquarters

Significance: Building T-100 is significant as a relatively unmodified representative of temporary division headquarters.[2]

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: Construction of Building T-100 probably began in the summer/fall of 1942. There is a minor discrepancy on the date of building completion. Notations on the "As Built" drawing 800-204 state that the building was completed by 5 September 1942[3]; however the Real Property Records on file in Buildings T-2160 and T-2145 note the building as completed on 24 August 1942.[4]

2. Architect: George E. Bergstrom, Chief of the Architectural Unit in the Engineering Branch of the Construction Division, Quartermaster Corps, supervised the 1941 revision of the 700 series service club plans that produced the 800-204 series drawings in April 1941.[5]

3. Original and subsequent owners: The site for the expanded Camp McCoy military reservation was condemned and purchased by the War Department in the spring of 1942.[6] The owner from 1942-47 was the War Department. Since 1947, the U.S. Department of the Army, the successor to the War Department has held title.

4. Builder, contractor, suppliers: Building T-100 was part of construction area D at Fort McCoy. Bids for the construction of the cantonment were let in February 1942 and contracts were awarded in late March. The contracts for the seven principal construction areas were fixed-price in nature. The War Department purchased the lumber used in Building T-100 and the rest of the cantonment in the spring of 1942. The remaining materials used in construction were apparently purchased by subcontractors in the Wisconsin area.[7]

5. Original Plans and Construction: Building T-100 was built from 800 series plan number 800-204 and associated plan numbers 800-205, 800-206, 800-207, 800-208, 800-118, 800-119, 800-120, 800-121, 800-145, 800-151, 800-154, 800-157, 800-161, 800-185, 800-186, 800-190, 800-197, 800-199, and 800-142.[8] The original plans used to construct Building T-100 are currently on file in "As Built" envelope #68 in Building T-2111. The original cost of the building was $43,400.[9] Noted alterations to the original building plan at the time of construction include the use of round concrete piers instead of square piers. The chimney height was reduced from 65'-0" to 50'-0". The knee bracing was deleted from rooms paralleling the entry and the service switch box in room 15 was changed from 100-amps to 200-amps.[10]

6. Alterations and additions: Alterations to the original plan, as noted above, include the use of concrete piers, the reduction of the chimney height, the elimination of knee bracing in two rooms and changing the electrical service amperage.[11] The following changes have been made to the structure since construction. The structure was rehabilitated in 1951. Changes included covering all existing bare walls with gypsum board, painting all stairs and concrete floors. All interior and exterior walls were painted with two coats of paint and all hardwood floors were covered with mastipave flooring.[12] The structure's exterior was repainted in 1958 and reroofed in 1961. In 1968 the front double doors were replaced with two 2'-6" x 6'-8" aluminum doors, all 6" x 6" posts were replaced with 2" x 6" wall bracing and ceilings were dropped from 8'-7" to 7'-0" and covered with acoustical tile. In 1971, the coal furnace was replaced with an LP gas unit and the water heater was converted to electricity. In 1976, 1978 and 1979 ceiling and wall insulation was installed. In 1984, the west wing was altered for the construction of a conference room, three air conditioners were installed, rooms 107, 109, 112, 113, 115 and 201 were carpeted, and two rear-view projection screens were installed in the conference room. Other alterations noted are the replacement of the original grayish white cement asbestos siding in some areas with white and dark gray siding, the addition of fiberglass foundation skirting, the replacement of a ventilation louver on the front, and the addition of inset aluminum storm frames have been added to the existing windows.

FORT McCOY, BUILDING T-100 (POST ADMINISTRATION)
[Camp McCoy, Building T-100 (Post Administration)]
HABS NO. WI-308-K (page 3)

B. Historical Context:

The construction of Building T-100 was part of a massive, nation-wide mobilizaton program designed to build cantonments to house and train the expanded World War II Army. The 800 series, and the 700 series that preceded it, was a comprehensive set of drawings which could be used interchangeably in creating the various building types. Through the construction of temporary wood-frame buildings such as Building T-100, the 1939 housing capacity of 200,00 was increaded to 6,000,000 person by the close of the mobilization program in the fall of 1944. In addition, war mobilization buildings are significant for their construction and technological innovation. Techniques such as the standardization of plans, prefabrication of units and assembly-line approach to construction were largely developed in the construction of these mobilization structures.

Building T-100 is the main post headquarters constructed in the main cantonment area of the "New Camp McCoy", mobilization cantonment built by the War Department between the entrance of the United States into World War II in late 1941 and early 1943.[13] The 1941-43 cantonments were constructed to house and serve as training bases for approximately 525,000 men drafted for Army service after the declaration of war.[14] Two newly organized Army Divisions occupied Camp McCoy during their training. The Second Army Division arrived soon after the completion of construction in the fall of 1942 and remained until November 1943, leaving for action in the Italian Campaign. The 76th Division then took over, remaining until December 1944, when they departed for service in the Battle of the Bulge and the subsequent occupation of Germany. Additionally, engineer, railhead, field artillery, tank destroyer, ordnance, and maintenance troops were trained at Camp McCoy concurrently with the Second and 76th Divisions.[15] In 1944, Camp McCoy also became personnel center for the Army, receiving and redirecting soldiers for new assignments. The following year the personnel center began also to discharge veterans as the war came to a close. The personnel center closed in 1946, and most other functions of the camp halted a year later.[16]

After three years of relative inactivity, Camp McCoy was reactivated by the Defense Department for training of Regular, Reserve, and National Guard Units in the Fifth Army Area for service in the Korean War. Since 1953 the camp has become a center for training reserve units of the Army and National Guard Regiments of the Midwest Region.[17]

Building T-100 was assigned to the Second Division from 16 November 1942 until 2 August 1943 when they were relieved by the 76th Division. The 76th division was relieved by the IX Corps Artillery on 22 November 1944. The IX corps Artillery was relieved by the VI Corps Artillery on 2 February 1951. All listings on assignees after this date state the building was assigned to "HQ Commandant."[18]

FORT McCOY, BUILDING T-100 (POST ADMINISTRATION)
[Camp McCoy, Building T-100 (Post Administration)]
HABS NO. WI-308-K (page 4)

PART II. ARCHITECTURAL INFORMATION:

A. General Statement:

1. Architectural Character: Building T-100 is a well preserved relatively unmodified example of typical 800 series, type DHQ-1 Division Headquarters.

2. Condition of Fabric: The general condition of Building T-100 is good. Areas of deterioration noted in the structure exterior include places where the original cement asbestos siding has fallen off and been replaced.

B. Description of the Exterior:

1. Overall Dimensions: Building 100 is an H-shaped building with a main block and two wings. The main structure measures 29'-6" x 60'-0" and the wings measure 29'-6" x 70'-0". The height from grade to the roof ridge is approximately 26'-0".[19] The 29'-6" width dimension also occurs in Buildings T-1129, T-1863, and T-2002. The roof ridge height is approximately the same as the type BKS-74 two-story barracks.

2. Foundations: Building T-100 rests on a system of concrete piers and footings. The perimeter footings are 2'-0" x 2'-0" while those under the interior columns are 2'-3" x 2'-3". Both footing sizes are 1'-0" deep.

3. Walls: The exterior walls of Building T-100 consist of three layers: wooden sheathing, black construction paper, and cement asbestos siding measuring 11" x 24", the standard size used throughout the cantonment.

4. Structural System, framing: Building T-100, and all 800 series mobilization structures, are of light frame construction. A pitched chord truss with bolted connections supports the roof.

5. Porches, stoops: The structure has a covered porch on the south front that measures 11'-6" x 26'-0". The porch roof is supported by six simple round columns resting on brick pedestals.

6. Chimneys: The chimney, like all others at McCoy, is constructed of red-buff brick in a running bond with Portland cement mortar. The chimney is 50'-0" in height and 5'-3" square. It has a fire clay flue lining and rests on a 10" thick concrete footing.[20]

7. Openings:

a. Doorways and Doors: At the south entrance there is a double doorway with aluminum doors. At the north rear there are two single-light metal doors on the center of the first and second floors on each wing and one,

single-light metal door at the rear entry to the main building.

b. Windows: The windows are eight-over-eight-light double-hung sash. There are twenty-three at both of the south front and north rear, and ten windows at both the east and west sides. All windows have inset aluminum storm screens.

C. Description of the Interior:

1. Floor Plans:

a. Basement: There is no basement under Building T-100.

b. Main Floor: Building T-100, as constructed in 1942, had a gross area of 11,800 square feet.

c. Attic: The attic contains the roof trusses.

2. Stairways: There is a wood stairway to the second level immediately off of the rear entrance on the north side of the building. Exit stairs are visible on the exterior of each of the lateral wings on the north side of the building.

3. Flooring: The offices for the executive officers are carpeted. The rest of the facility is covered with 9" x 9" vinyl composition tile. The entry foyer also contains a roll carpet embellished with an Army herald.

4. Wall and Ceiling finishes: The ceiling and walls are finished with gypsum board and painted.

5. Openings: There are no interior openings.

6. Decorative Trim: There is no decorative trim.

7. Mechanical Equipment:

a. Heating: The structure was originally heated by a coal-fired steam boiler with an electric stoker. Heat was dissipated via steam radiators.[21] The structure is currently heated with LP gas.

b. Kitchen appliances: The executive officers' area has a small coffee bar with a microwave oven.

c. Ventilation: The building is vented through four, 12" metal gravity vents along the roof ridge. Wooden louvers are also present on the north and south walls.

d. Lighting: No original lighting preserved. Current lighting needs served through fluorescent ambient and task luminares.

D. Site:

1. General Setting and orientation: Building T-100, and the other buildings of Block 1, are located at the center of the Fort McCoy "Triad." The building is located within a complex also containing the post finance office, a library, officers club, NCO open mess and housing.[22]

2. Historical Landscape Design: Directly south and north of the building there are asphalt parking lots. Ornamental trees and shrubs have been planted along all elevations. The remainder of the building lot is relatively flat and planted in grasses.

PART III. SOURCES OF INFORMATION:

A. Architectural Drawings: Building T-100 was built from 800 series plan number 800-204, and supplemented with 800-205, 800-206, 800-207, 800-208, 800-118, 800-119, 800-120, 800-121, 800-145, 800-151, 800-154, 800-157, 800-161, 800-185, 800-186, 800-190, 800-197, 800-199, 800-142.

B. Bibliography:

1. Primary and unpublished sources:

a. Standard Mobilization Drawings 800 Series Plan number 800-204*, 800-205, 800-206, 800-207, and 800-208, 800-118, 800-119, 800-120, 800-121, 800-145, 800-151, 800-154, 800-157, 800-161, 800-185, 800-186, 800-190, 800-197, 800-199, 800-142. (* This plan was modified at Ft. McCoy.)

b. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-L, May 23, 1942.

c. Record Drawing file #68 in "As Built" Files, Building T-2111, Fort McCoy, Wisconsin.

d. Real Property Record. Building and Structures, Building T-2145, Fort McCoy, Wisconsin.

2. Secondary and Published sources:

"As Built" file # 68, Building T-2111, Fort McCoy, Wisconsin.

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Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Building T-2160. Original January-11-1965; Revision #11 June-4-1976.

Buildings and Structures Descriptions, from box marked "Save Historical"; Building T-2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

Equipment Records, from file marked "Equipment Records"; Building T-2145 (Meatlocker), Fort McCoy, original typed entries, undated.

"Historical Summary", typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy n.d., ca. 1985, p. 6.

Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States.* [volume in the series, *United States Army in World War II: The Technical Services*] Washington, D.C.: Office of the Chief of Military History, United States Army).

Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23,1942. Original blueline print in map file cabinet Building T-2145 "Meatlocker".

Post Engineer Office Historical Data, Document dated 15 January 1946, on file Building T-2145 "Meatlocker," Fort McCoy, Wisconsin.

Real property records file; Building T-2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building T-2145 "Meatlocker," Fort McCoy, Wisconsin.

"To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

Unmarked wooden File Box, Building T-2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

C. Likely Sources Not Investigated:

1. Documentary: Information of firm charged with the construction of Building T-100 may be available. Additional data may be available in the National Archives on George E. Bergstrom and the other architects who produced and revised the 800 series Standard Drawings.

2. Oral History: Interviews could be conducted with personnel involved in the construction of the Division Headquarters at Fort McCoy and the military records and local area could be searched for personnel who may have worked at the headquarters.

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D. Supplemental Materials:

1. The original "As Built" drawing for Building T-100 are filed in Building T-2111, at Fort McCoy, Wisconsin. Standard plans for the 800 series DHQ-1 are available from the National Archives.

Prepared by: James A. Glass Ph.D.
Field Supervisor
HABS Phase - Fort McCoy Project
September 1988

and

Keith Landreth, Richard Hayes
Associate Investigators
CERL Phase - Fort McCoy Project
December 1988

PART IV. PROJECT INFORMATION

The documentation of Fort McCoy was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) of the National Park Service, Robert J. Kapsch, chief, during the summer of 1988. The project was sponsored by the United States Army, Environmental Office, Colonel Ronald G. Kelsey, chief, with the assistance of Constance W. Ramirez, Historic Preservation Officer for the U.S. Army. Local sponsorship was provided at Fort McCoy by the base Commander, Colonel Sorensen, and by Al Balliett and Marvin Westenburg of the Environmental Division; John Calvert, Engineering Planning and Services Division; and Robert Wells, Real Property. The project was managed through the HABS/HAER WASO office by John A. Burns, architect, and project leader and Catherine Crawford, HABS historian. The documentation was undertaken at the HABS/HAER field office at Fort McCoy by James Glass, HABS/HAER, and by Keith Landreth, U.S. Army Construction Engineering Research Laboratory (USACERL), Champaign, Illinois. Large-format photography was done by Martin Stupich.

FORT McCOY, BUILDING T-100 (POST ADMINISTRATION)
[Camp McCoy, Building T-100 (Post Administration)]
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NOTES:

1. Basic Information map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

2. Buildings and Structures Descriptions, from box marked "Save Historical"; Building 2145 (Meatlocker), Fort McCoy, Original typed entries, undated.

3. Completion label appended to Record Drawing # 800-204. "As Built" envelope #68, Building 2111, Fort McCoy, Wisconsin.

4. Real property records file; Building 2160, Fort McCoy, Wisconsin. Also see original Real Property Record cards filebox in Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

5. Lenore Fine and Jesse A. Remington, *The Corps of Engineers: Construction in the United States*. [volume in the series, *United States Army in World War II: The Technical Services*,] (Washington, D.C.: Office of the Chief of Military History, United States Army), pp. 349.

6. "To Condemn 9600 acres for McCoy," *Sparta Herald*, February 9, 1942, p. 1.

7. Office of the Area Engineer, Camp McCoy, Wisconsin. "Camp McCoy Project--General Layout Plan No. 6150-1-L, May 23, 1942. Original blueline print in map file cabinet building 2145 "Meatlocker."

8. "As Built" envelope #68, Building 2111, Fort McCoy, Wisconsin. Real Property Records, Building 2160, Fort McCoy, Wisconsin.

9. Real Property Records, Building 2111, Fort McCoy, Wisconsin.

10. "As Built" envelope #68, Building 2111, Fort McCoy, Wisconsin.

11. Ibid.

12. Real Property Records, Buildings 2160 and 2145, Fort McCoy, Wisconsin.

13. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

14. Diane Wasch and Perry Busch, (draft) "History of the Design and Construction of Temporary World War II Buildings by the War Department." Historic American Buildings Survey, National Park Service, Washington, D.C., 1988, pp. 42, 47.

15. Post Engineer Office Historical Data, Document dated 15, January 1946, on file Building 2145 "Meatlocker," Fort McCoy, Wisconsin.

16. Ibid.

17. "Historical Summary," typescript summary of the history of Camp McCoy prepared by the Public Affairs Office, Fort McCoy nd., ca.1985, p. 6.

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18. Unmarked wooden File Box, building 2145, "Meatlocker," Fort McCoy, Wisconsin. File contains 4x5 cards listing buildings and assignees.

19. From "Standard 700 Series Drawings 1155 to ---" in map file, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

20. Standard Plan 800-204 Detail #29. in record Drawing file #69 in "As Built" Files, Building 2111, Fort McCoy, Wisconsin.

21. "As Built" file #68, Building 2111, Fort McCoy, Wisconsin, Fort McCoy, Wisconsin.

22. Basic Information Map, Fort McCoy Wisconsin, General Site Map North Fort Sheet 3a of 13. Office of the Facilities Engineer, Bldg 2160. Original January -11-1965; Revision #11 June-4-1976.

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Martin Stupich, photographer; September, 1988

WI-308-K-1 GENERAL VIEW FROM SOUTH

WI-308-K-2 PERSPECTIVE VIEW OF SOUTH (FRONT) AND EAST SIDE

WI-308-K-3 PERSPECTIVE VIEW OF SOUTH (FRONT) ENTRANCE PORTICO

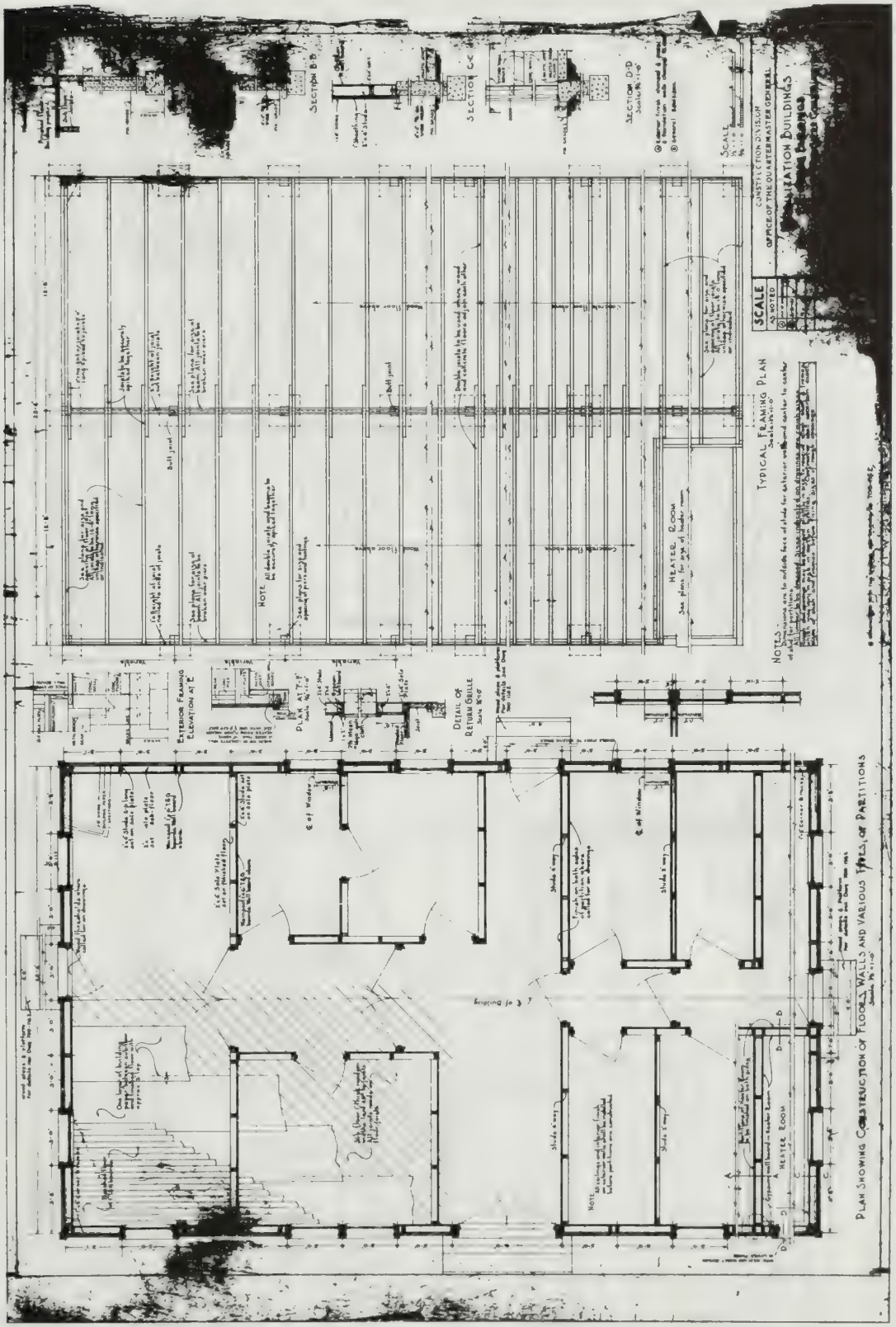
WI-308-K-4 PERSPECTIVE VIEW OF NORTH (REAR) AND WEST SIDE

WI-308-K-5 INTERIOR VIEW OF MAIN ENTRANCE

APPENDIX A

700 AND 800 MOBILIZATION DRAWINGS

Plan Number 700-225



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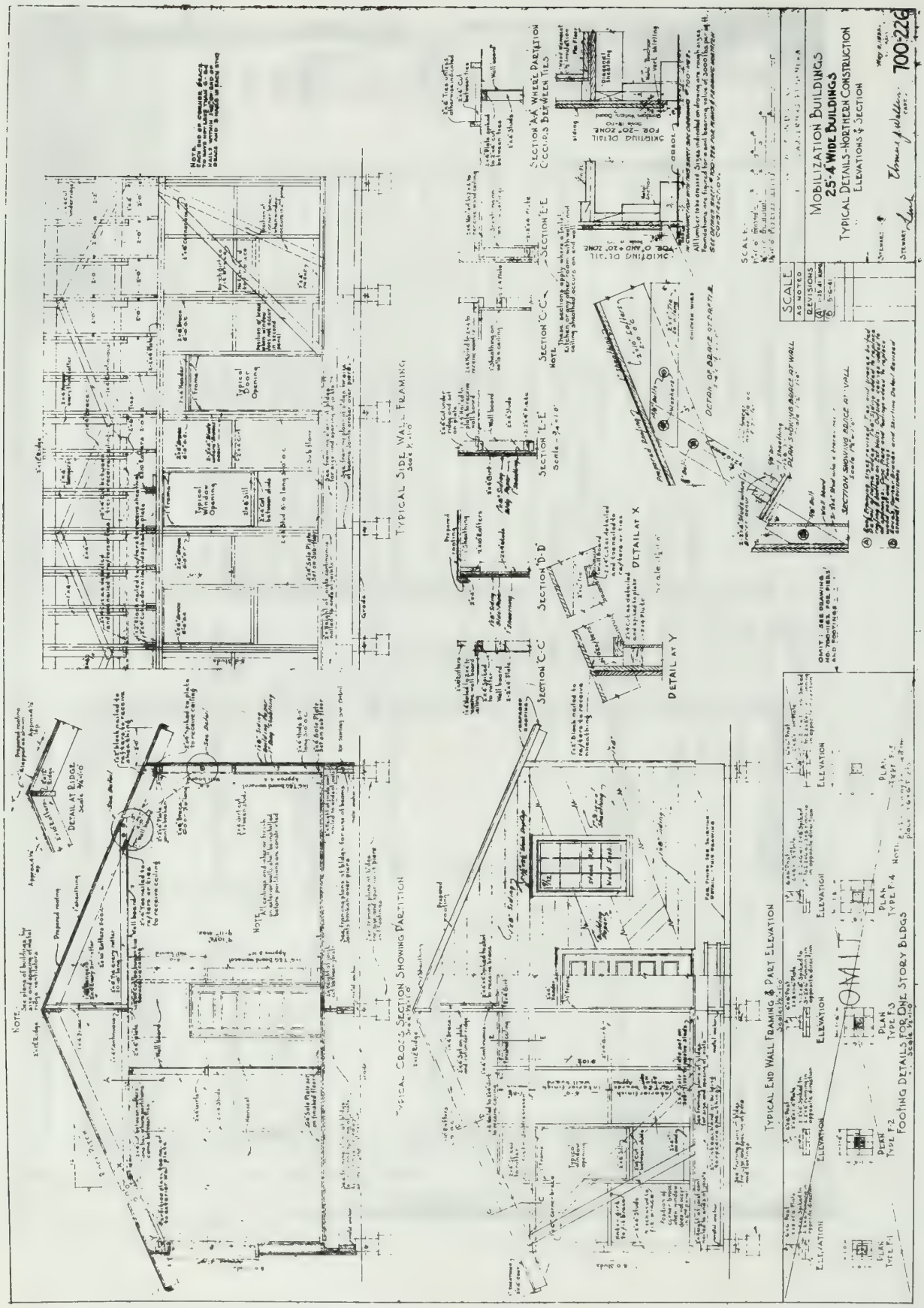

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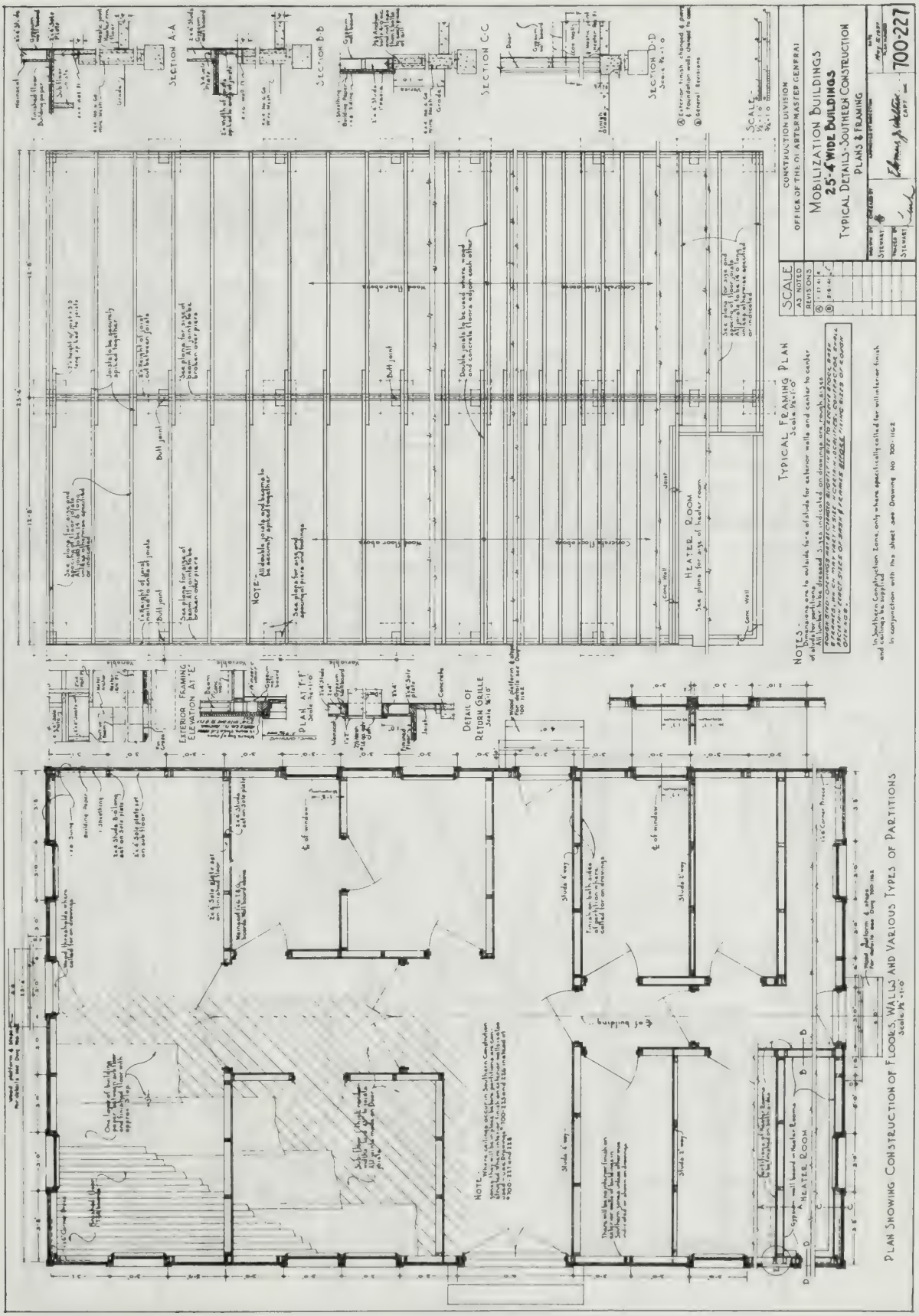

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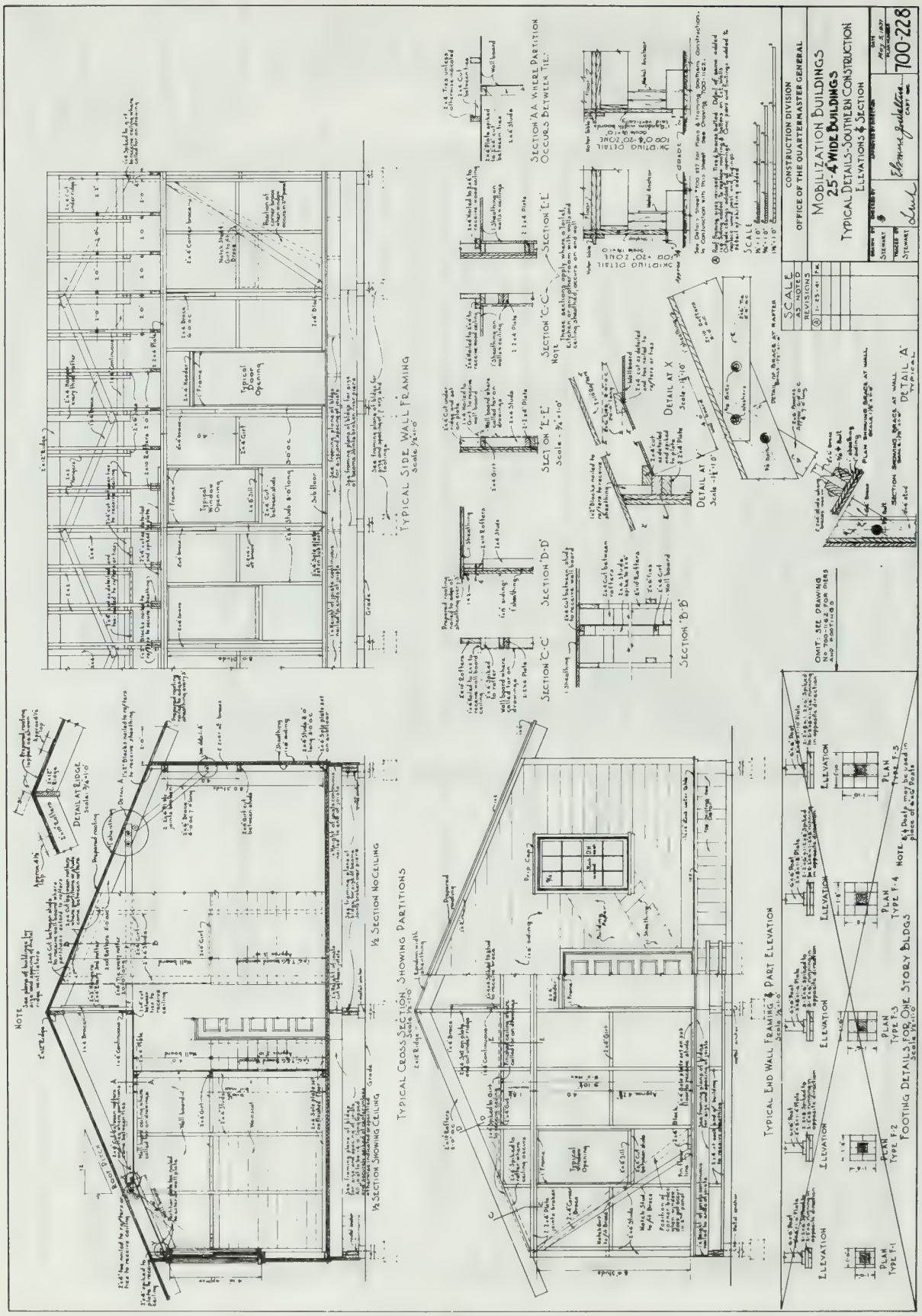

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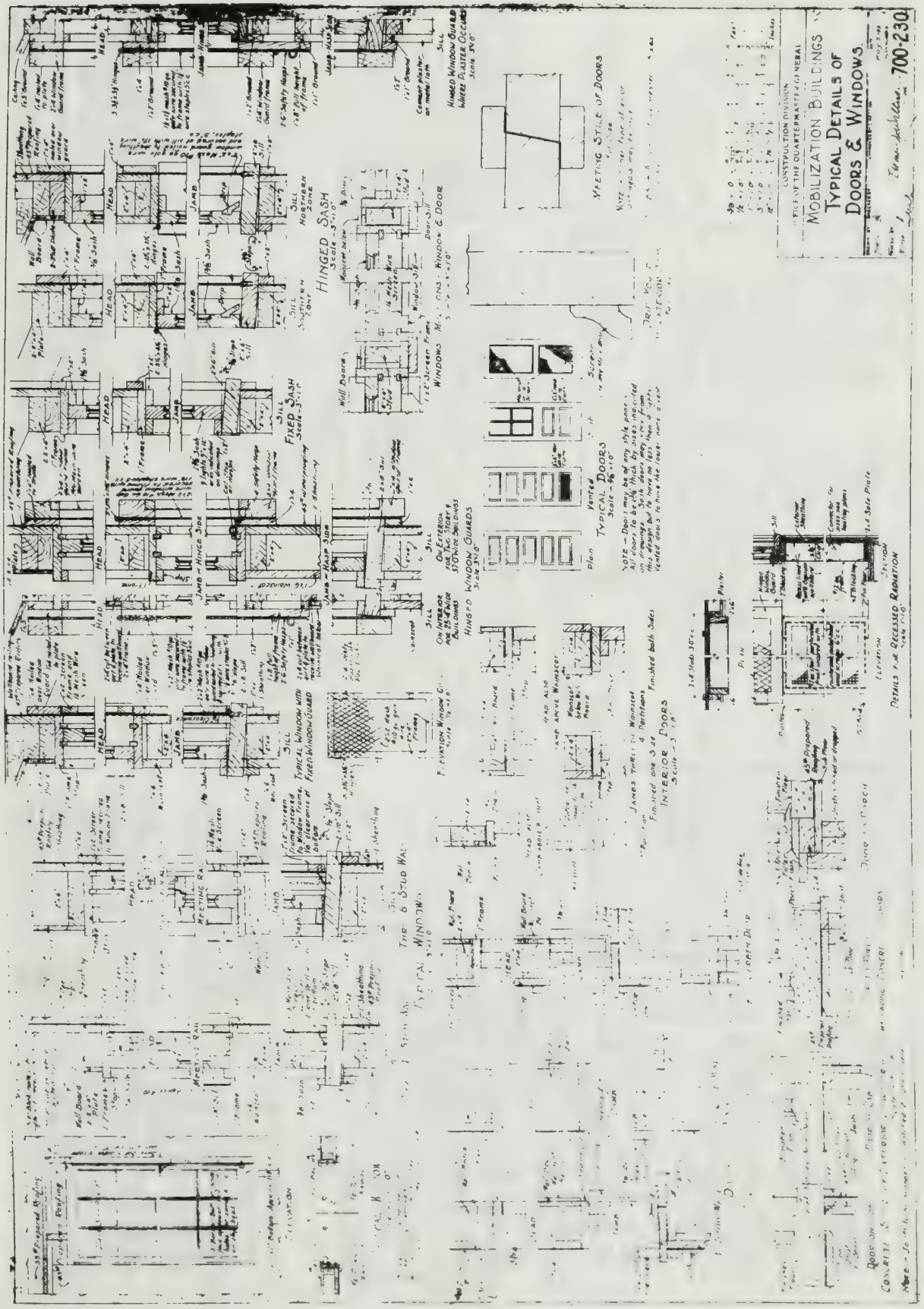

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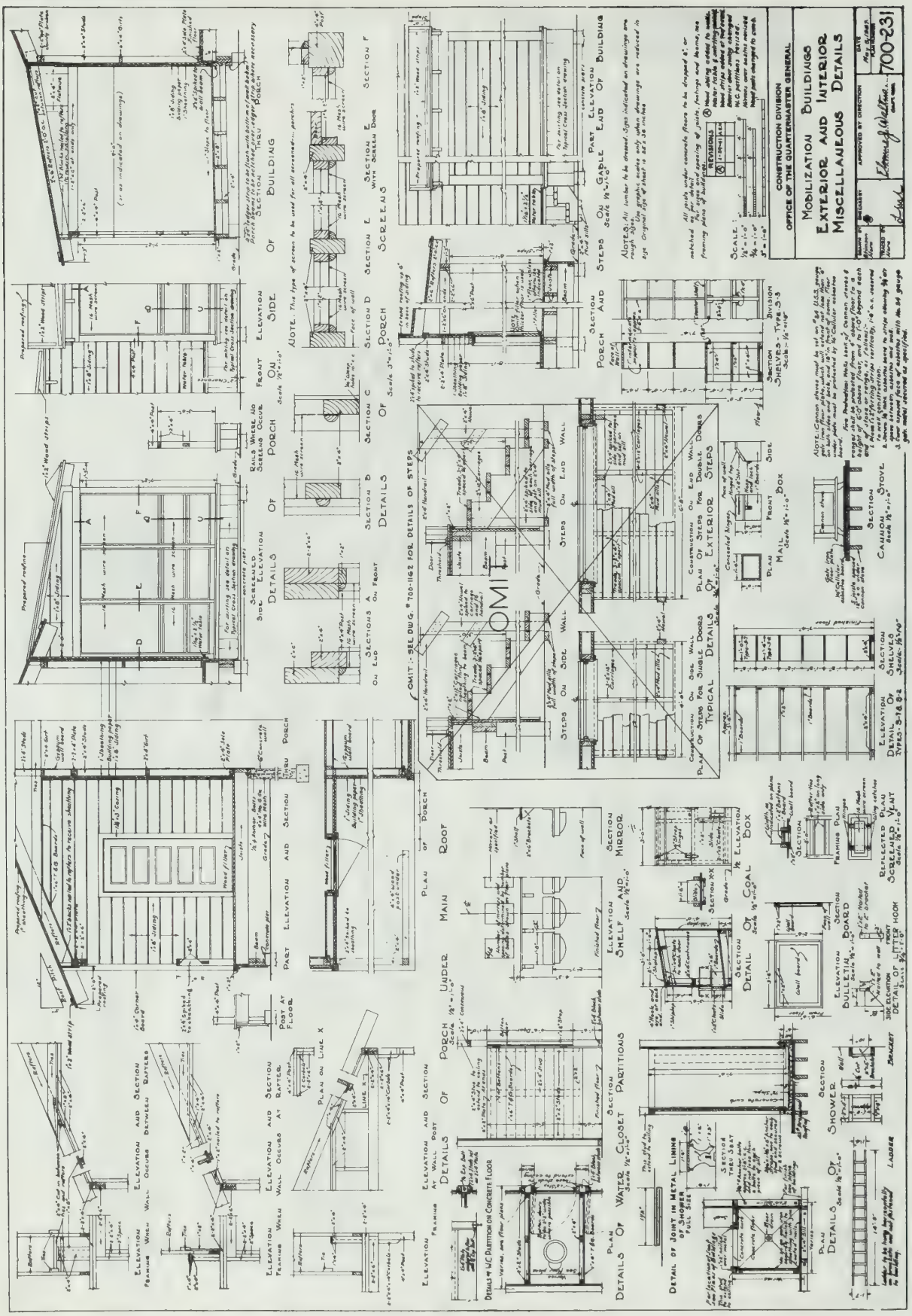

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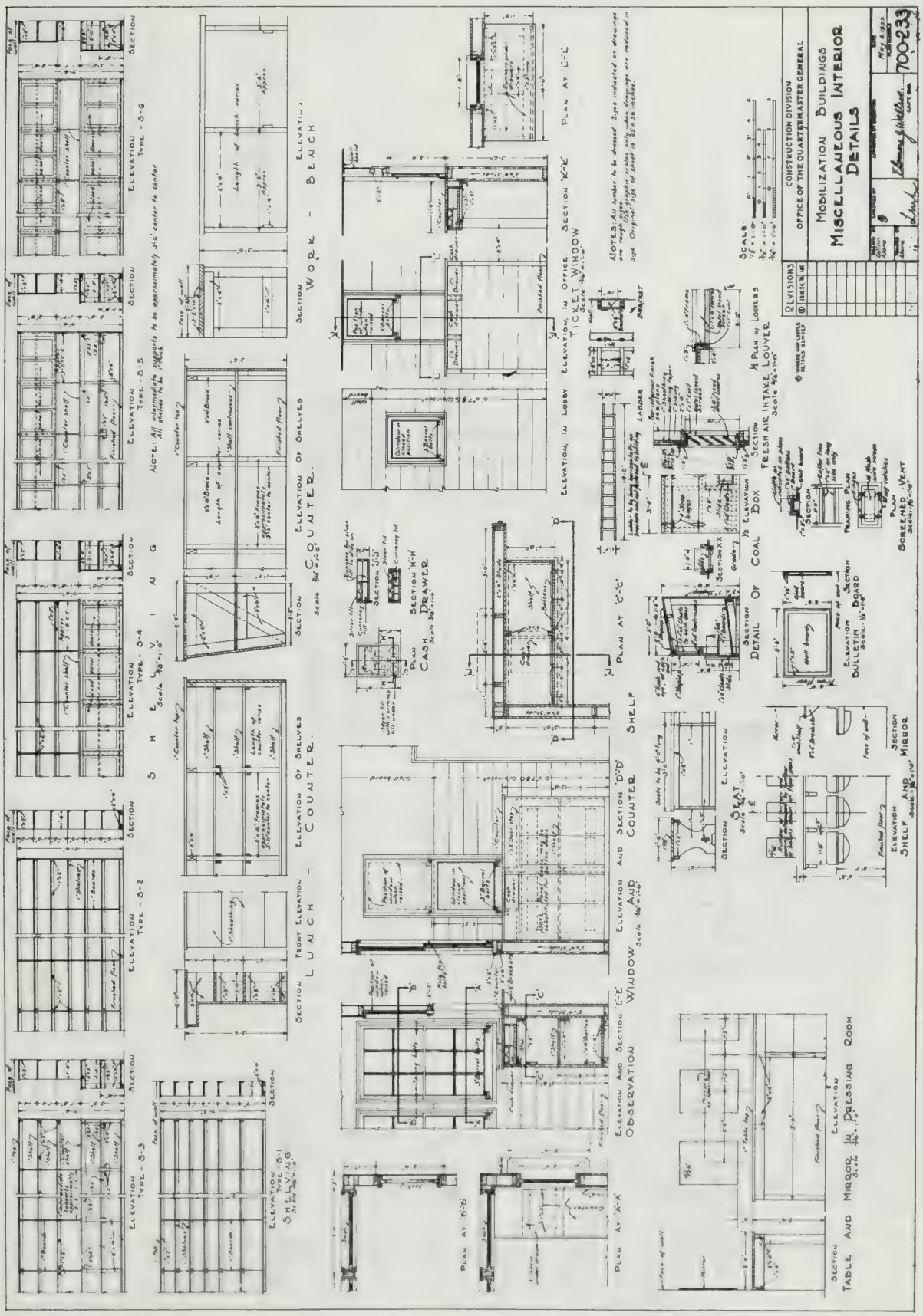

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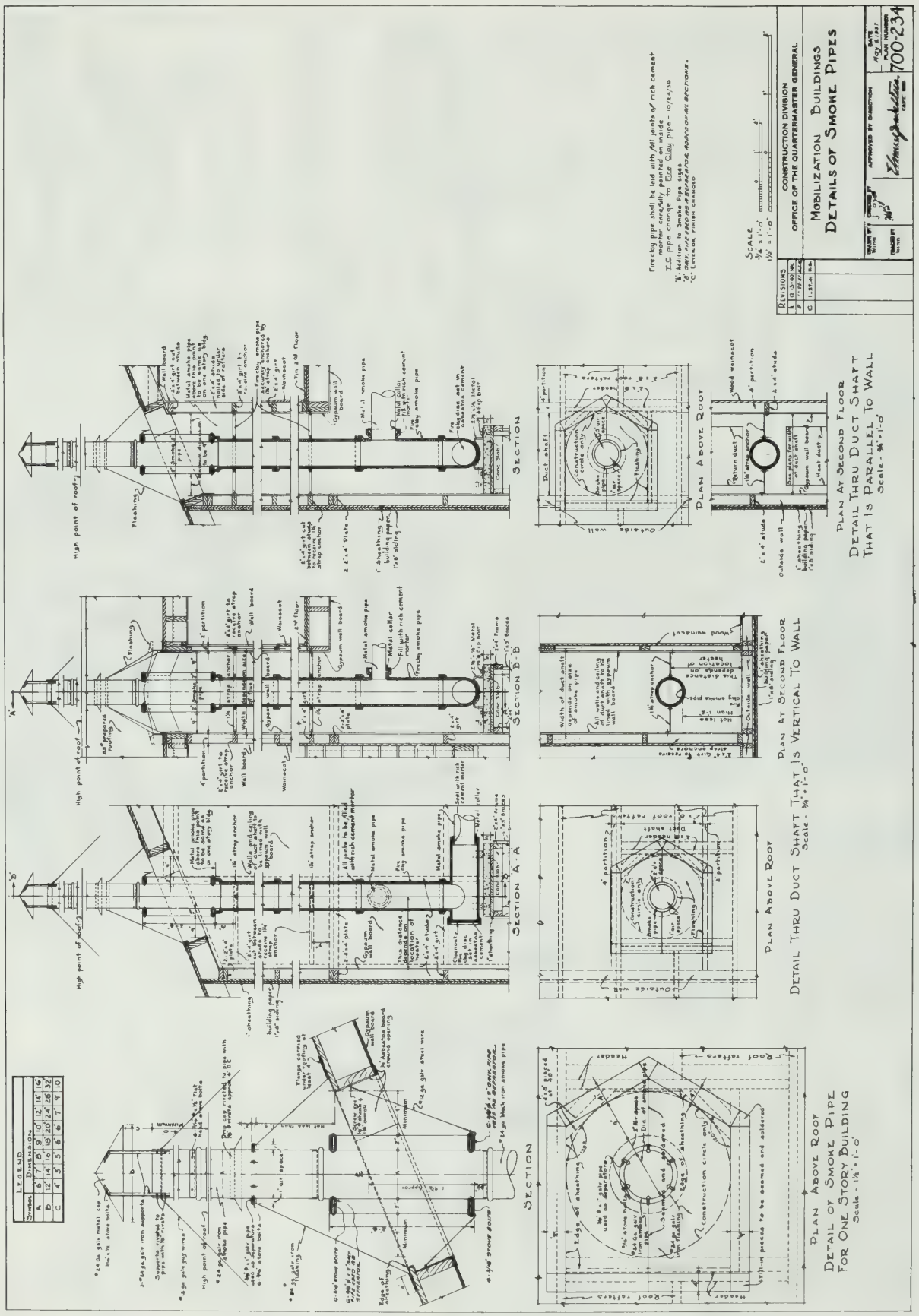

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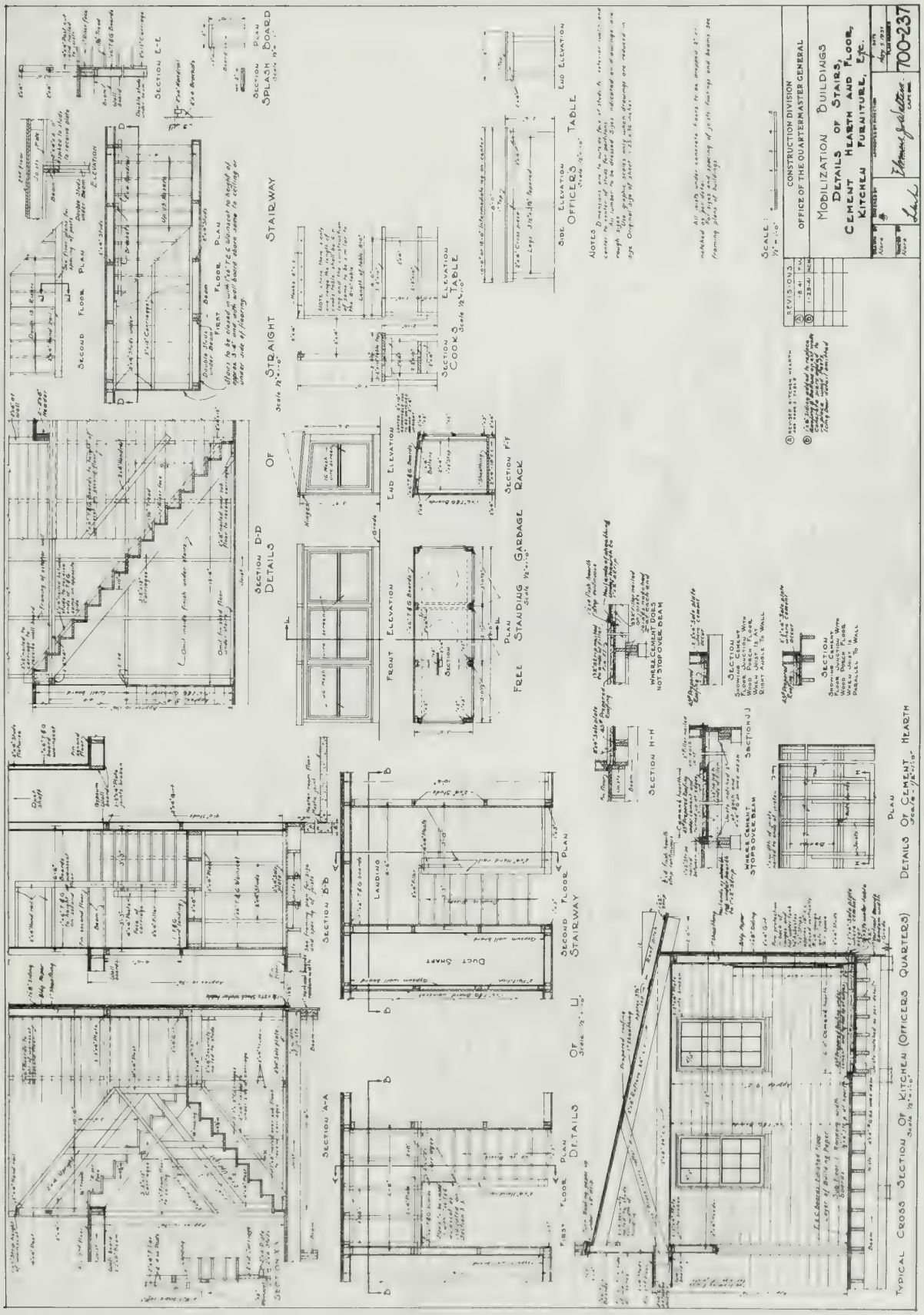

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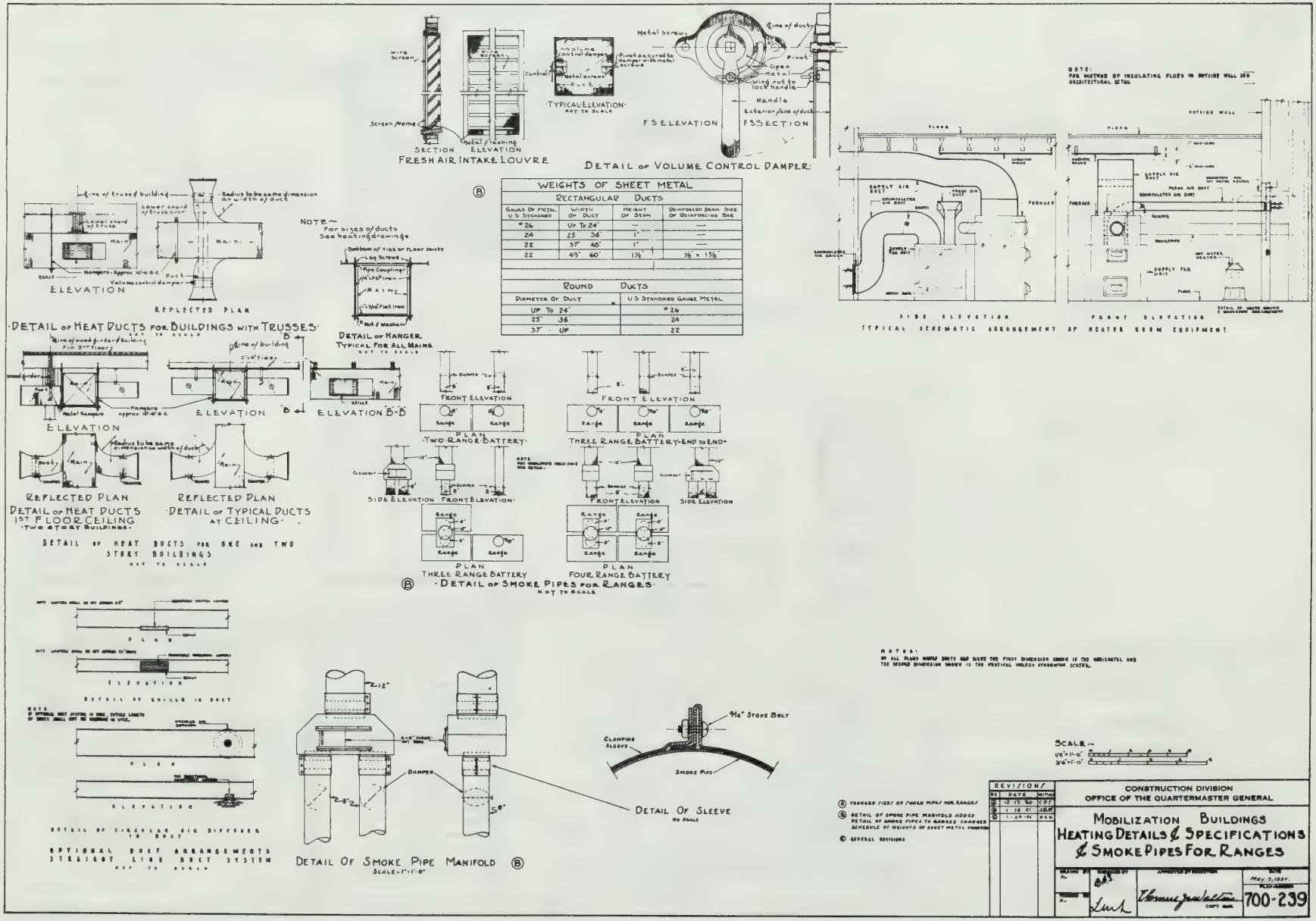

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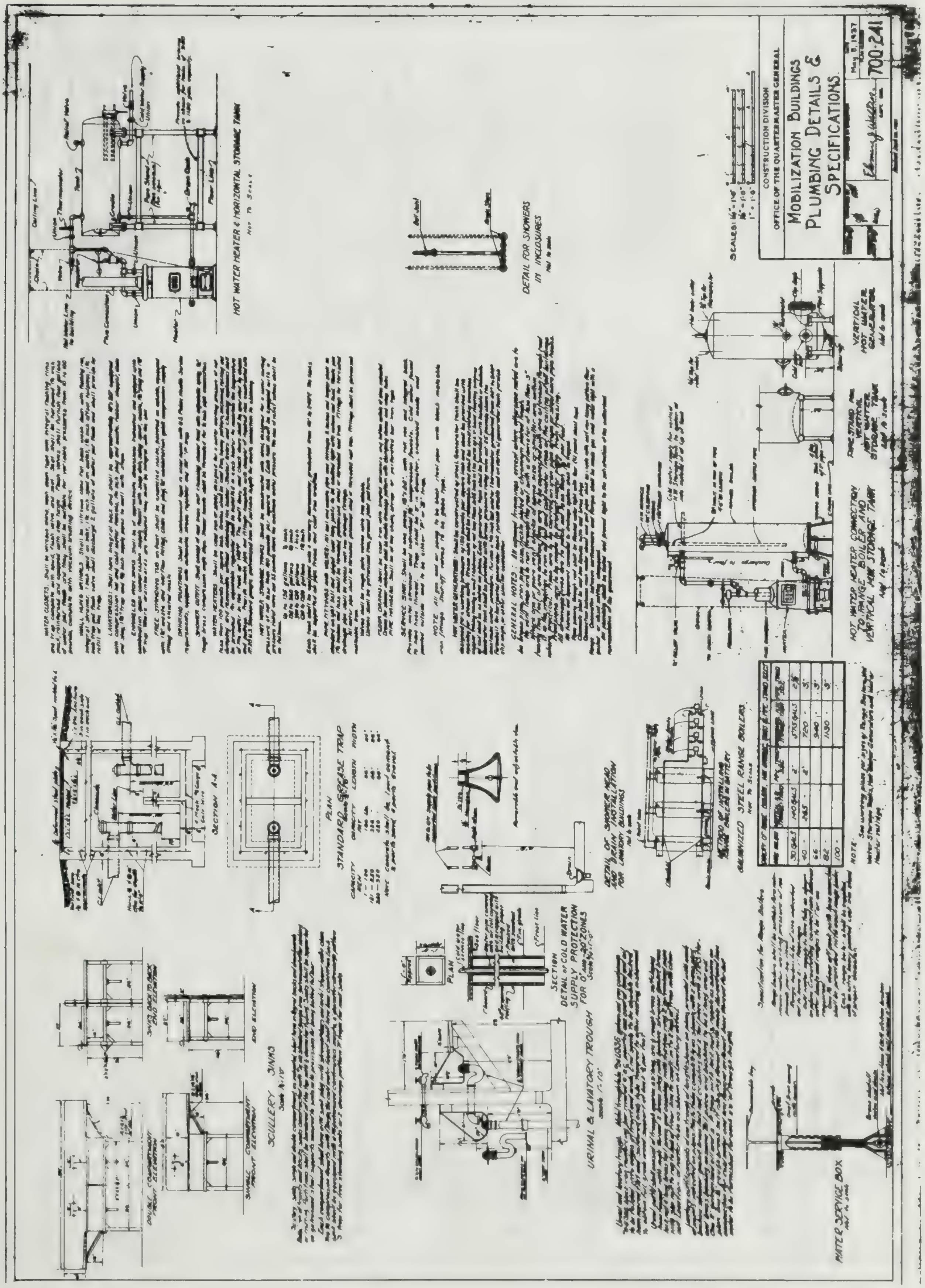
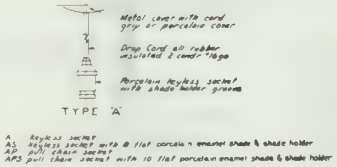
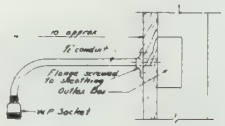


Plan Number 700-243

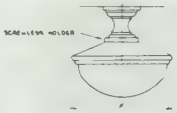


TYPE 'A'

A Keyless socket
AS keyless socket with 8" flat porcelain enamel shade & shade holder
AP pull chain socket
AP3 pull chain socket with 10" flat porcelain enamel shade & shade holder

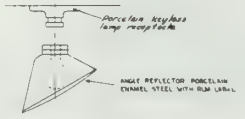


TYPE 'F'



Diameter	Watts
12"	not over 150
14"	200
16"	300
18"	500

TYPE 'B'

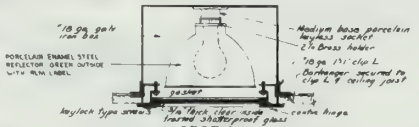


TYPE 'G'

D "22 ga brass, or porcelain canopy, porcelain socket opal glass diffuse lighting enclosing globe
CLOSE TO VENT & WARNINGS, BRIGHTNESS NOT EXCEEDING THREE CANDLES PER SQ.IN. AT ANY POINT IN THE LINE OF VISION AND AN OVERALL EFFICIENCY OF NOT LESS THAN 60%.
B.C. SAME AS ABOVE BUT WITH CANOPY SWITCH AND 6' OF LINEN CORD

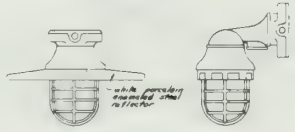
TYPE 'C'

C keyless socket
CS keyless socket with 10" flat metal shade & shadeholder
CP pull chain with 1½ linen cord
CPS pull chain with 1½ linen cord 10" flat metal shade & shadeholder



SECTION

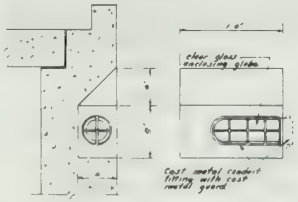
REFLECTED PLAN
TYPE 'H'



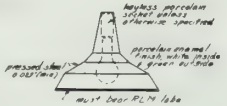
TYPE 'EC' TYPE 'EB'

EXPLOSION PROOF FIXTURES

EC Ceiling fixture with reflector
EB Bracket fixture

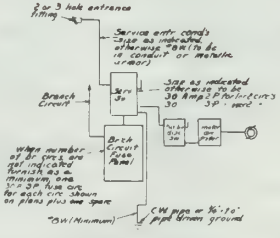


TYPE 'D'
VAPOR PROOF FIXTURE



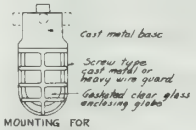
TYPE 'I'

Type I	12 Dia	CD 75 Watts
5	12"	160
3	14"	130
4	16"	200
5	18"	300-500
6	20"	730-1300



TYPICAL SERVICE DIAGRAM
The safety switch of fuse panel may be replaced with a molygrad or equivalent switch if available
Circuit breakers may be used in place of fuses When 3-P or 2-P circuit breakers are required for branch circuits the serv entr brkr may be omitted

MOUNTING FOR CONCEALED WORK



MOUNTING FOR EXPOSED WORK

TYPE 'J'
WEATHERPROOF FIXTURE
Galvanized or cadmium plated finish
JA Less metal guard

LEGEND

- Ceiling Outlet
- Bracket Outlet
- Duplex Receptacle
- Junction Box
- 20 Amp Receptacle
- 30 Amp Receptacle
- Meter
- S Single pole switch
- S3 Three Way switch
- S^P Switch & Pilot light
- Lighting Panel
- MC Motor Controller with Thermal O.L. Protection
- Unit Heater or Cooler
- R Range Outlet
- Exit Light
- Floor Outlet

- A Amperes
- C Conduit
- CM Circular Mils
- SW Switch
- V Volt
- W Wire
- Subscript denotes SW controls similarly labelled lamps

- 2 conductor circuit in wall or at ceiling
- Cross bars indicate number of conductors
- Underfloor circuit
- 2 wire circuit to panel
- 3 wires 2 circuits to panel

SCALE	CONSTRUCTION DIVISION
None	OFFICE OF THE QUARTERMASTER GENERAL

REVISIONS

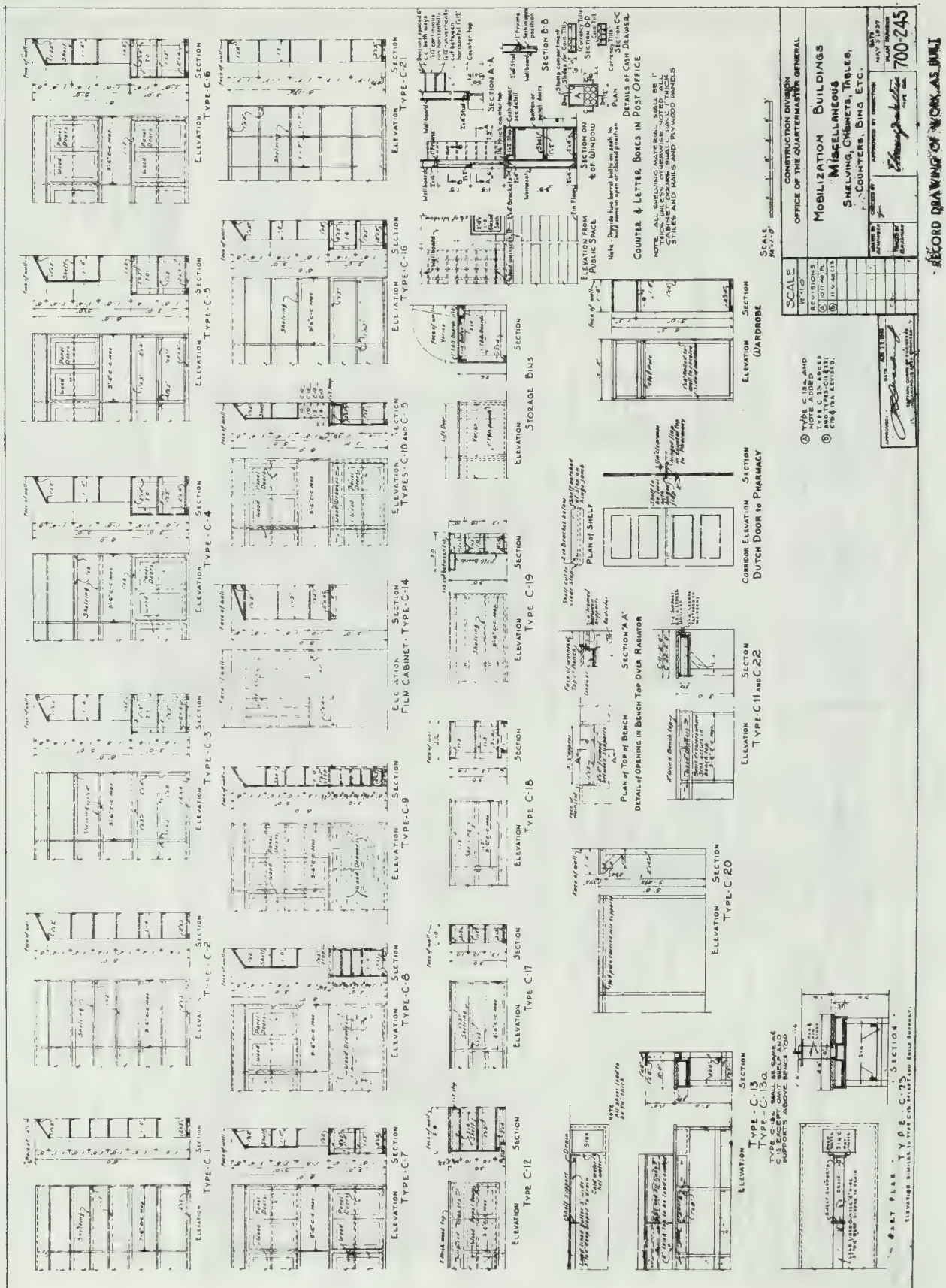
(A) Type J fixture added
(B) Reference Type J fixture added in Aerial Service
(C) U.S. Army Omitted Specifications (Reflector thickness CI sheet (Type J) to 0.063" changed Type D fixture not added C/S pipe and service conduit refers to diagram changed Spec. for Type D fixture
(D) ADDED NOTE TO TYPE "B" FIXTURE
(E) TYPE G FIXTURE REDRAWN NOTES CHANGED ON FIXTURES TYPES B-C, D-A

MOBILIZATION BUILDINGS
ELECTRICAL DETAILS

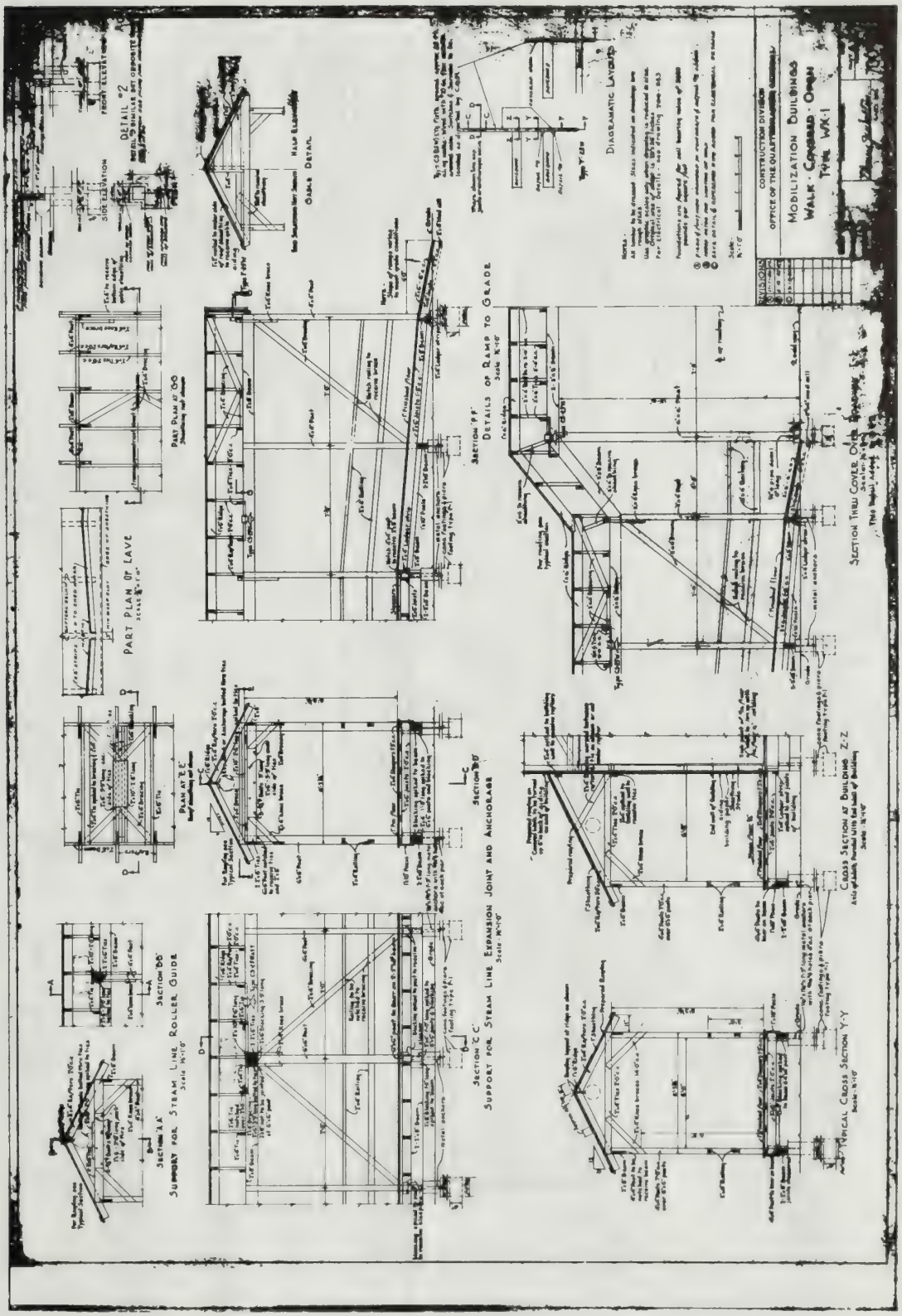
DRAWN BY Myerson | CHECKED BY C.E. | APPROVED BY DIRECTION Elmer J. Walter CAPT. Q.M.C. | DATE May 5 1937 | PLAN NUMBER 700-243

Plan Number 700-244

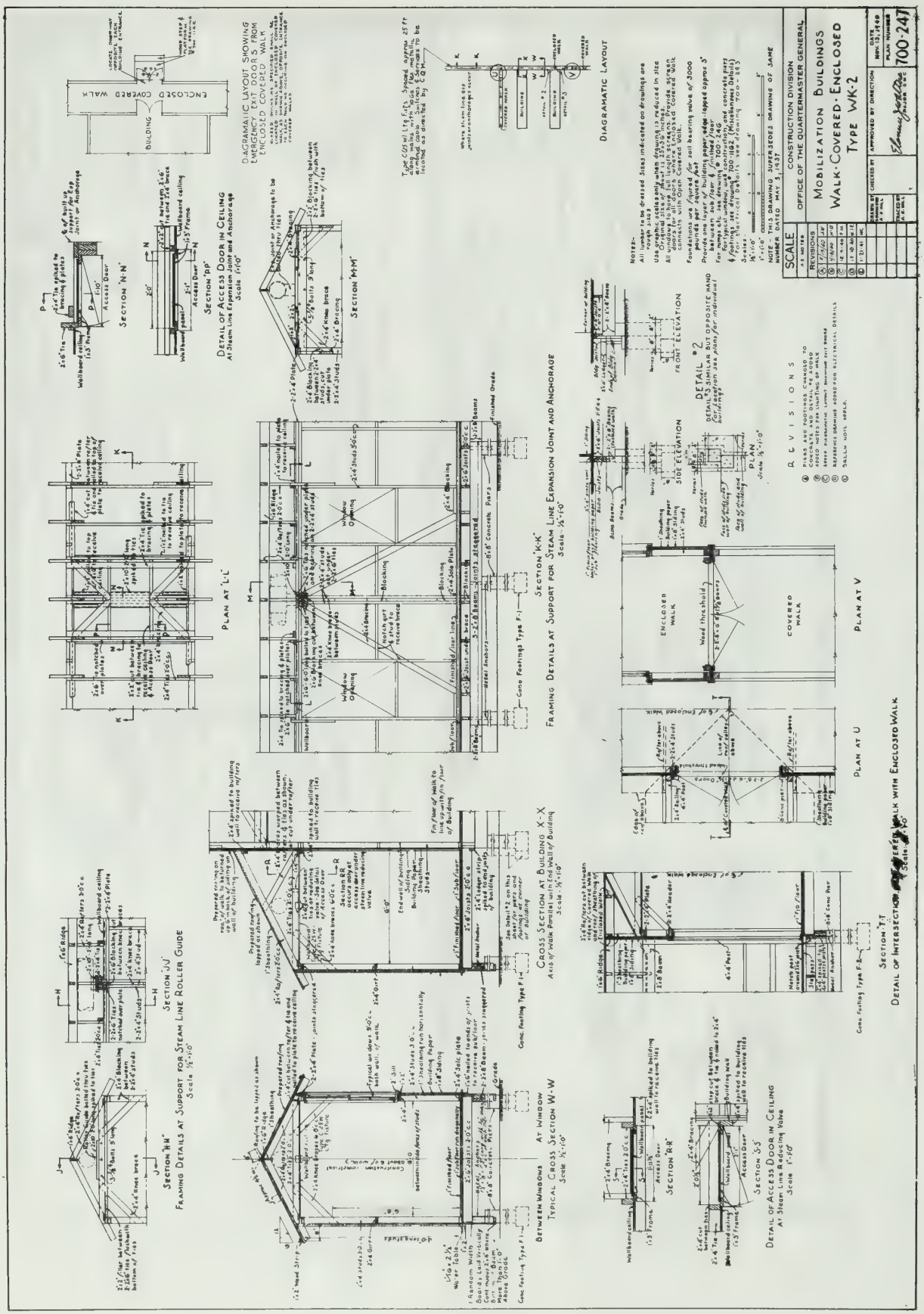
Plan Number 700-245



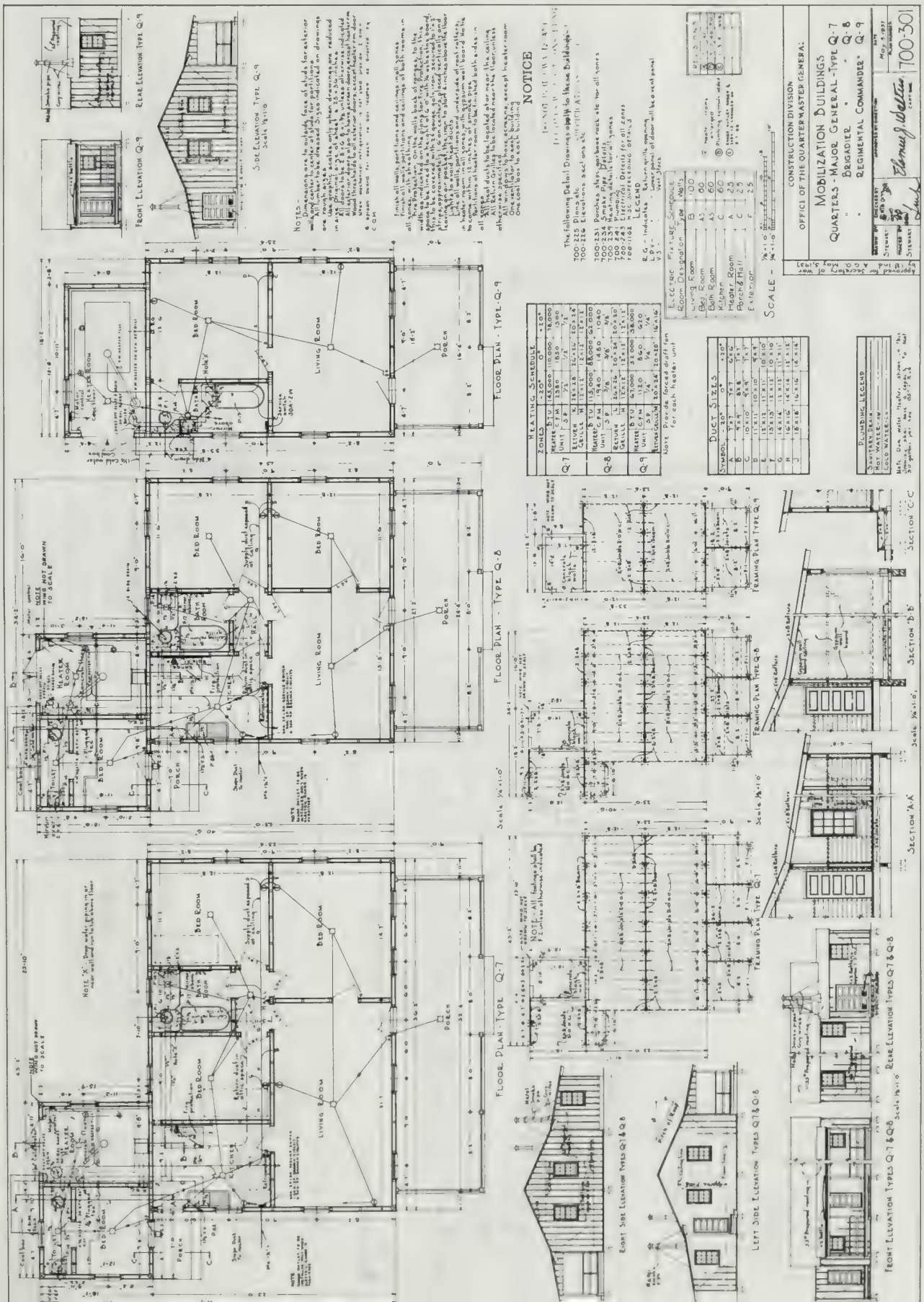
Plan Number 700-246



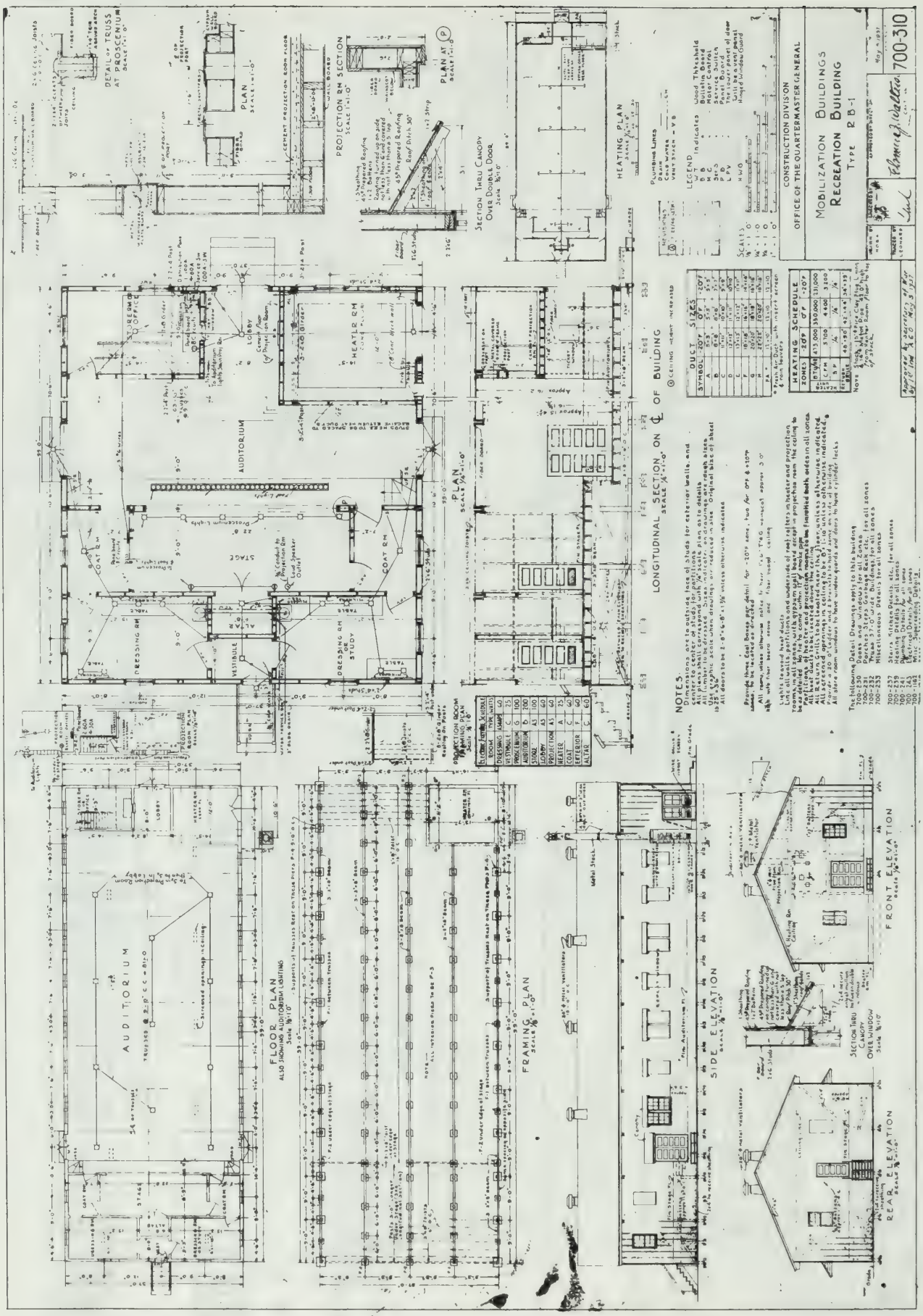
Plan Number 700-247



Plan Number 700-301

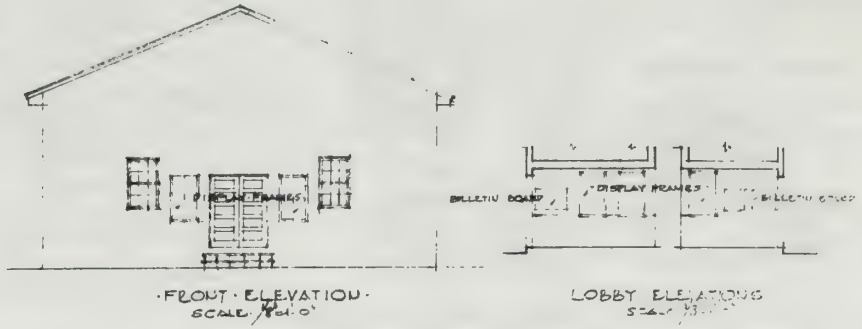


Plan Number 700-310



LIST OF MATERIALS

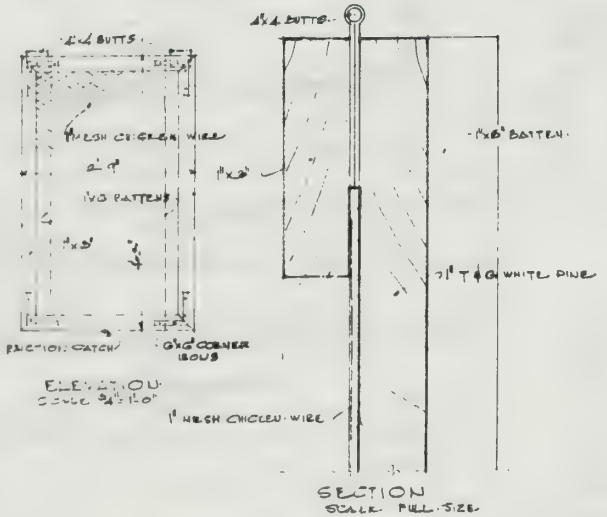
10 PIECES	1"x6"x 4'-3"	DRY #1 COMMON
90 "	1"x6"x 2'-9"	T&G WHITE PINE
5 M	1"x3"x 14'	#1 COMMON
3 PAIR	4"x4"	BUTTS
20 EACH	CORNER IRONS	6"x6"
22 LIN FT	1" MESH CHICKEN WIRE	30" WIDE
3 EACH	FRICTION CATCHES	
1 lb	SMALL STAPLES	
1 lb	4d NAILS	
1 GROSS	3/4" [illegible]	FLAT HEAD



FRONT ELEVATION
SCALE 1/8"=1'-0"

LOBBY ELEVATIONS

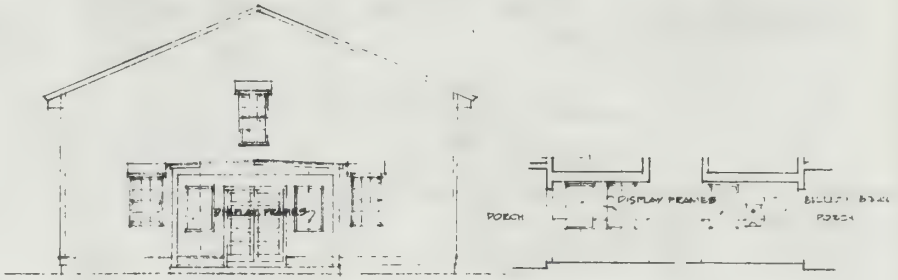
LOCATION OF DISPLAY FRAMES FOR R.B.-1



ELEVATION
SCALE 3/4"=1'-0"

SECTION
SCALE FULL SIZE

DISPLAY FRAME DETAILS



FRONT ELEVATION
SCALE 1/8"=1'-0"

LOBBY ELEVATIONS
SCALE 1/8"=1'-0"

LOCATION OF DISPLAY FRAMES FOR TH-2

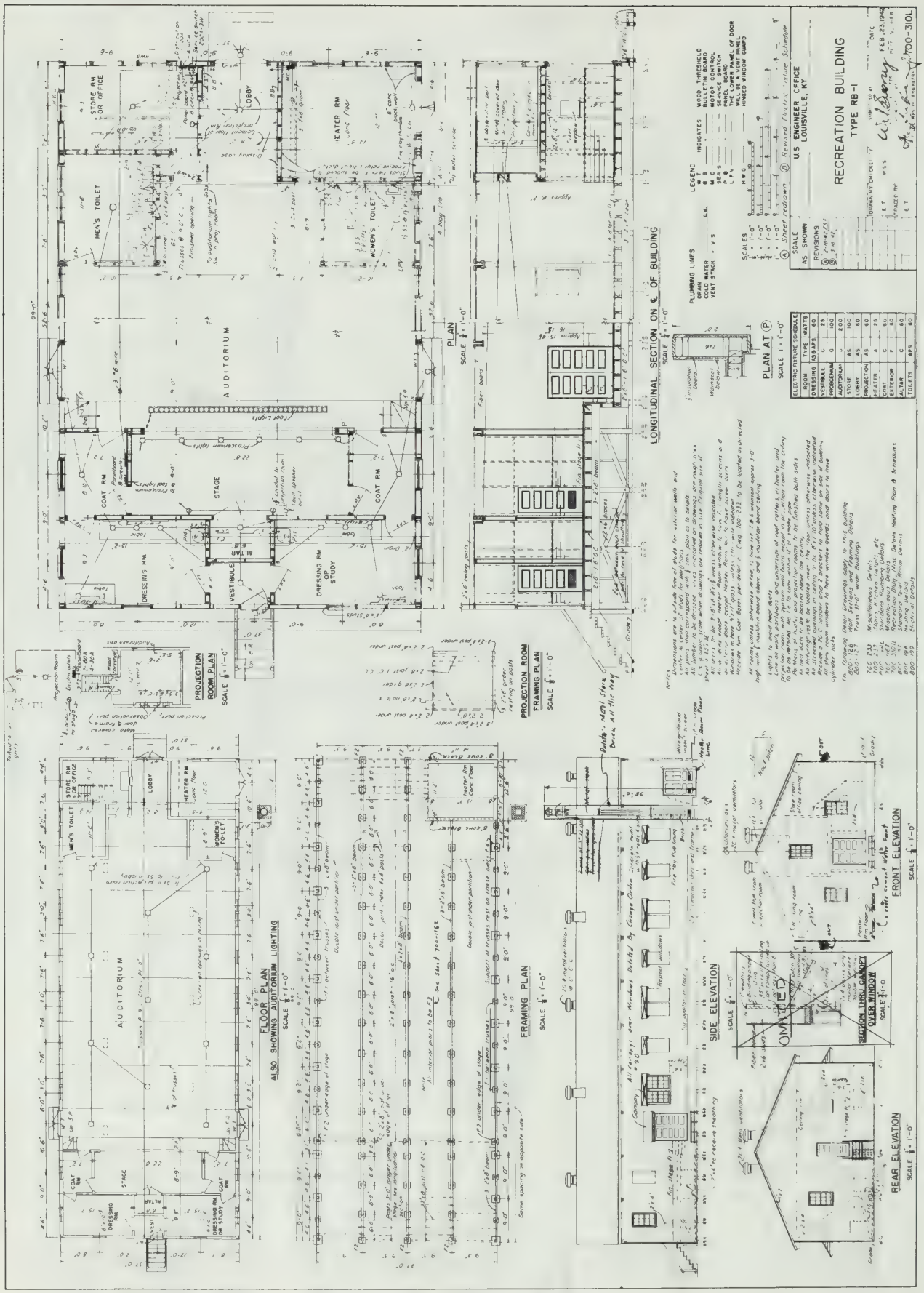
AS NOTED

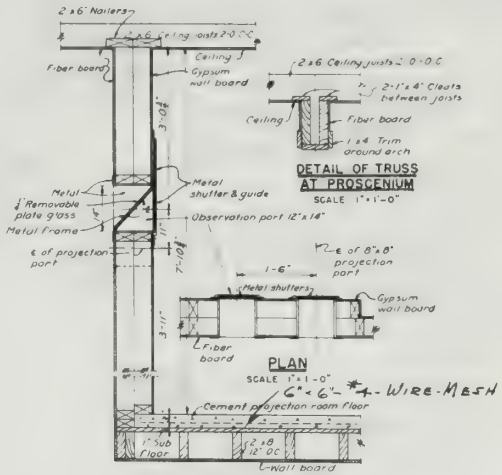
MOBILIZATION BUILDINGS
TYPES R.B-1 & TH-2
LOCATION & DETAILS OF DISPLAY FRAMES

Sept 23/1960

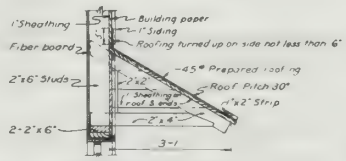
700-310.1

Plan Number 700-310L

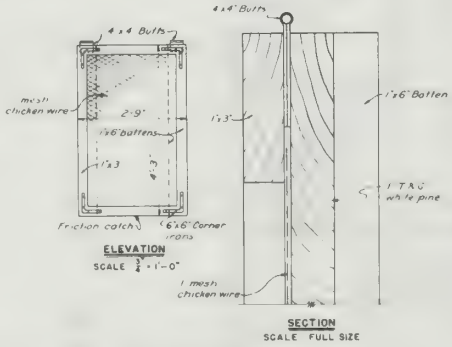




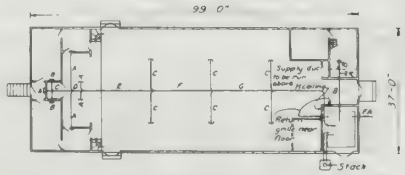
LOBBY ELEVATIONS
SCALE $\frac{1}{8}$" = 1'-0"



SECTION THRU CANOPY OVER DOUBLE DOOR
SCALE $\frac{3}{4}$" = 1'-0"



DISPLAY FRAME DETAILS



HEATING PLAN
SCALE $\frac{1}{16}$" = 1'-0"

DUCT SIZES	
SYMBOL	
A	5 x 5
B	8" x 8"
C	10" x 10"
D	11" x 11"
E	12" x 12"
F	16" x 16"
G	18" x 18"
H	20" x 20"
FA*	12" x 10"

* Fresh Air Duct with insect screen & rain louvers

Note
Stack-15" ø fire clay flue lining & 14" ø metal pipe 42'-0" high from Heater Room floor to top of stack. For gas fired heater run stack 2'-0" above high point of roof.

HEATING SCHEDULE		
Heater Unit	BTU/HR	350,000
	C F M	4,400
	S P	1/4"
Return Grille 2 @ 16"		

(B) Return Grilles revised
(A) Sheet redrawn

SCALES
AS SHOWN
REVISIONS
(B) 2-16-42 FBF
(A) 1-16-42

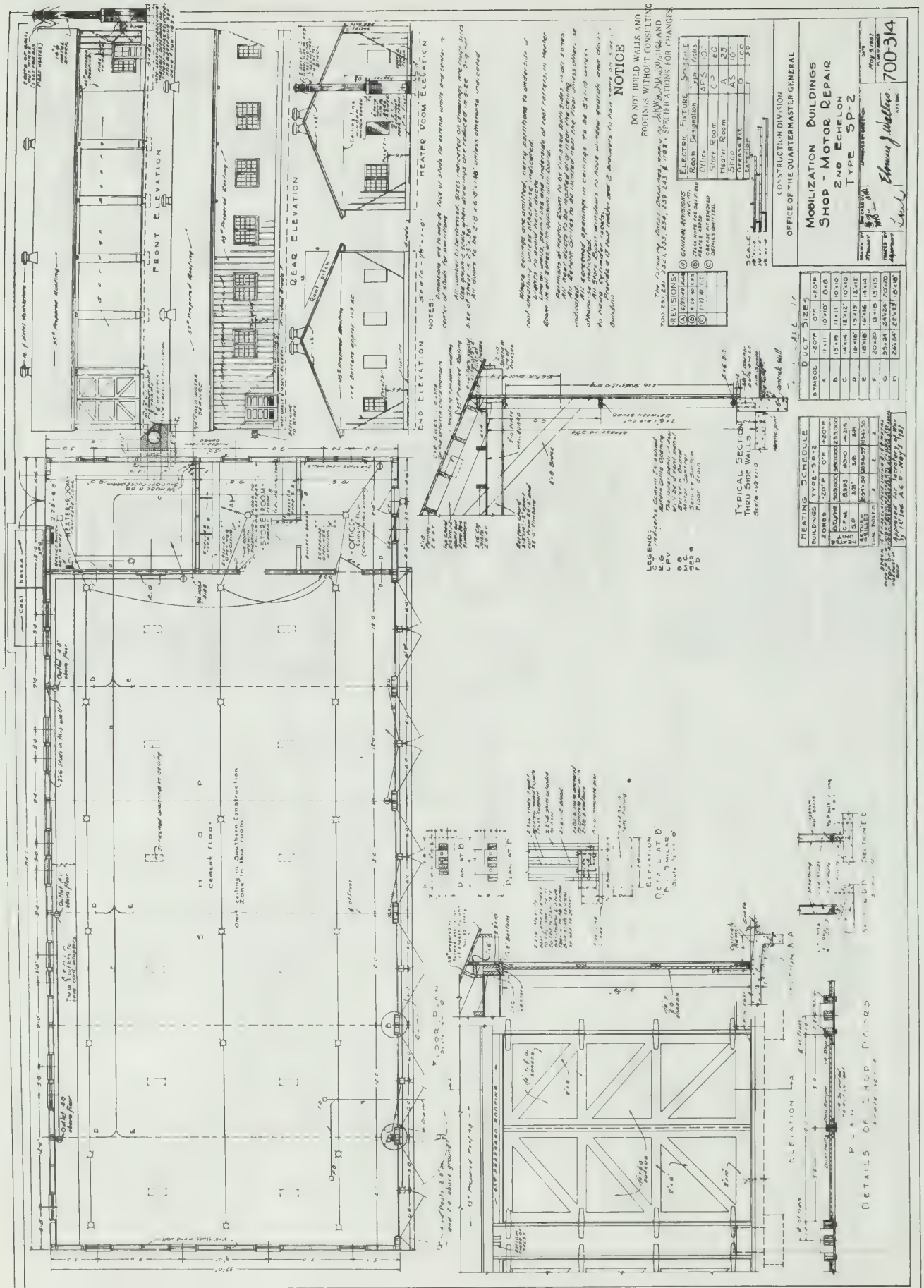
U S ENGINEER OFFICE
LOUISVILLE, KY

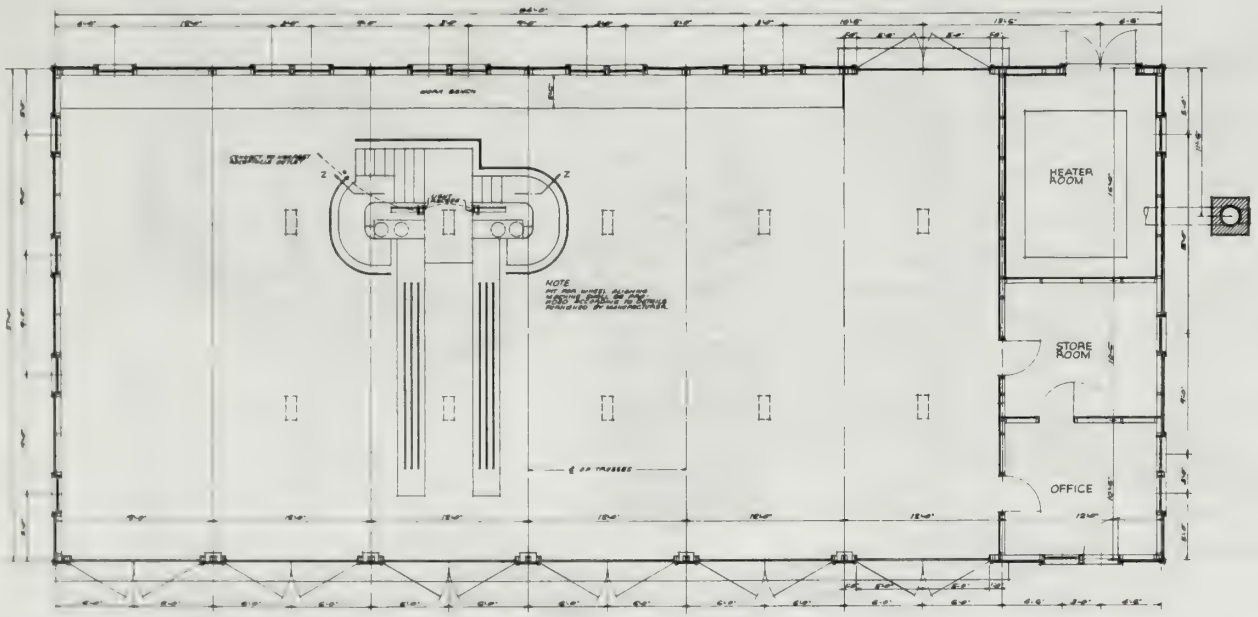
RECREATION BUILDING
TYPE RB-1
MISCELLANEOUS DETAILS

DRAWN BY	CHECKED BY	SUBMITTED BY	DATE
HWM	FBF	W.S. Bragg, PRINCIPAL ENGINEER	FEB 23, 1942
TRACED BY		APPROVED BY	PLAN NUMBER
HWM	WSB	Asst. CHIEF, ENGINEER	700-310.IL

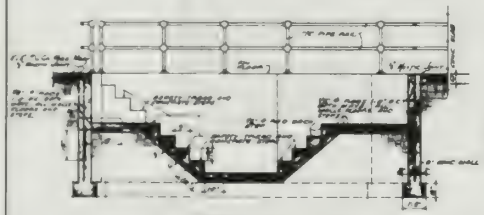
Plan Number 700-310.IL

Plan Number 700-314





FLOOR PLAN



SECTION "2-2"

NOTE

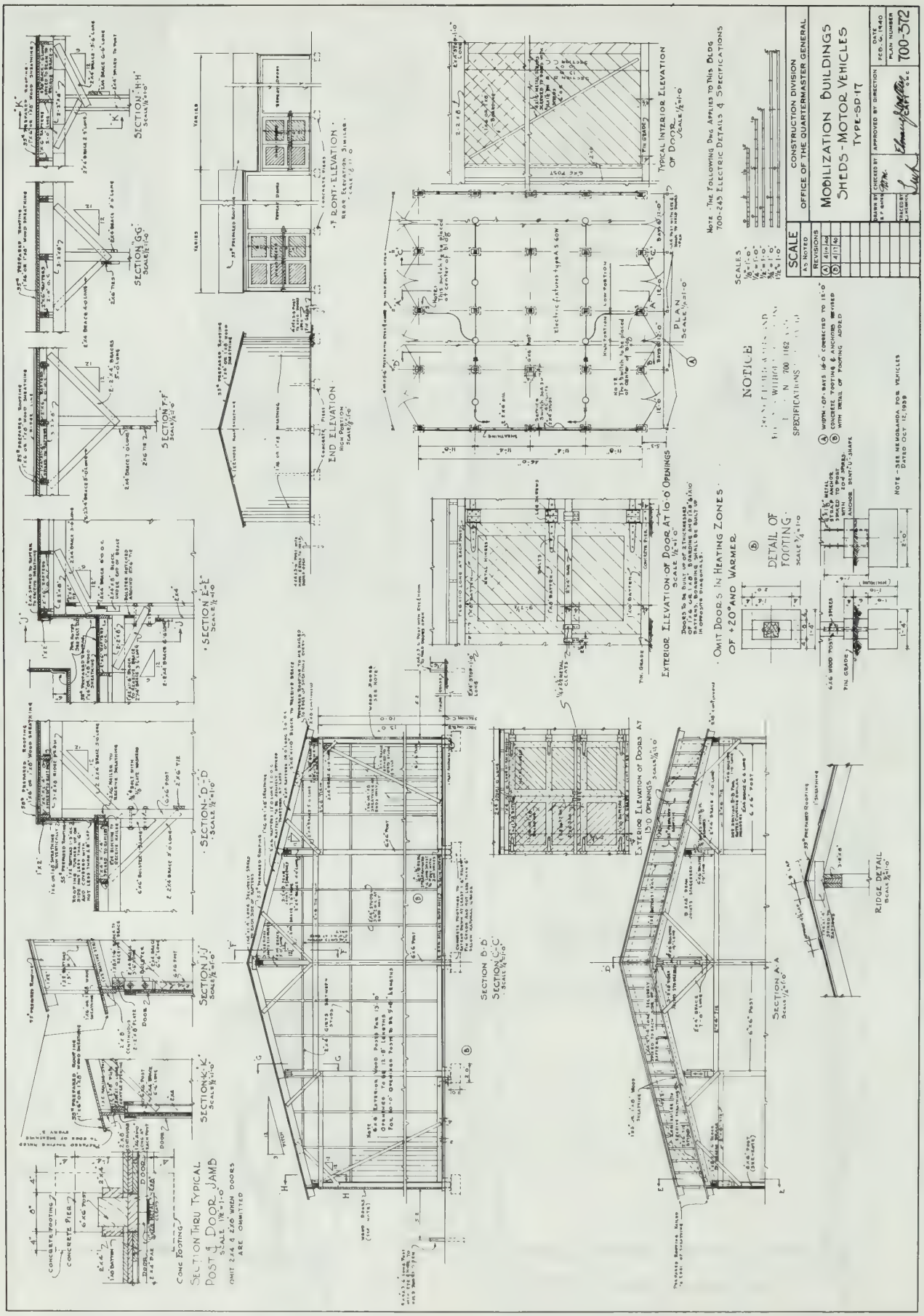
Ⓐ GREASE PIT REMOVED

NOTE
SEE DRAWING NO. 700-314 FOR CONSTRUCTION DETAILS NOTES AND APPARATUS DRAWINGS

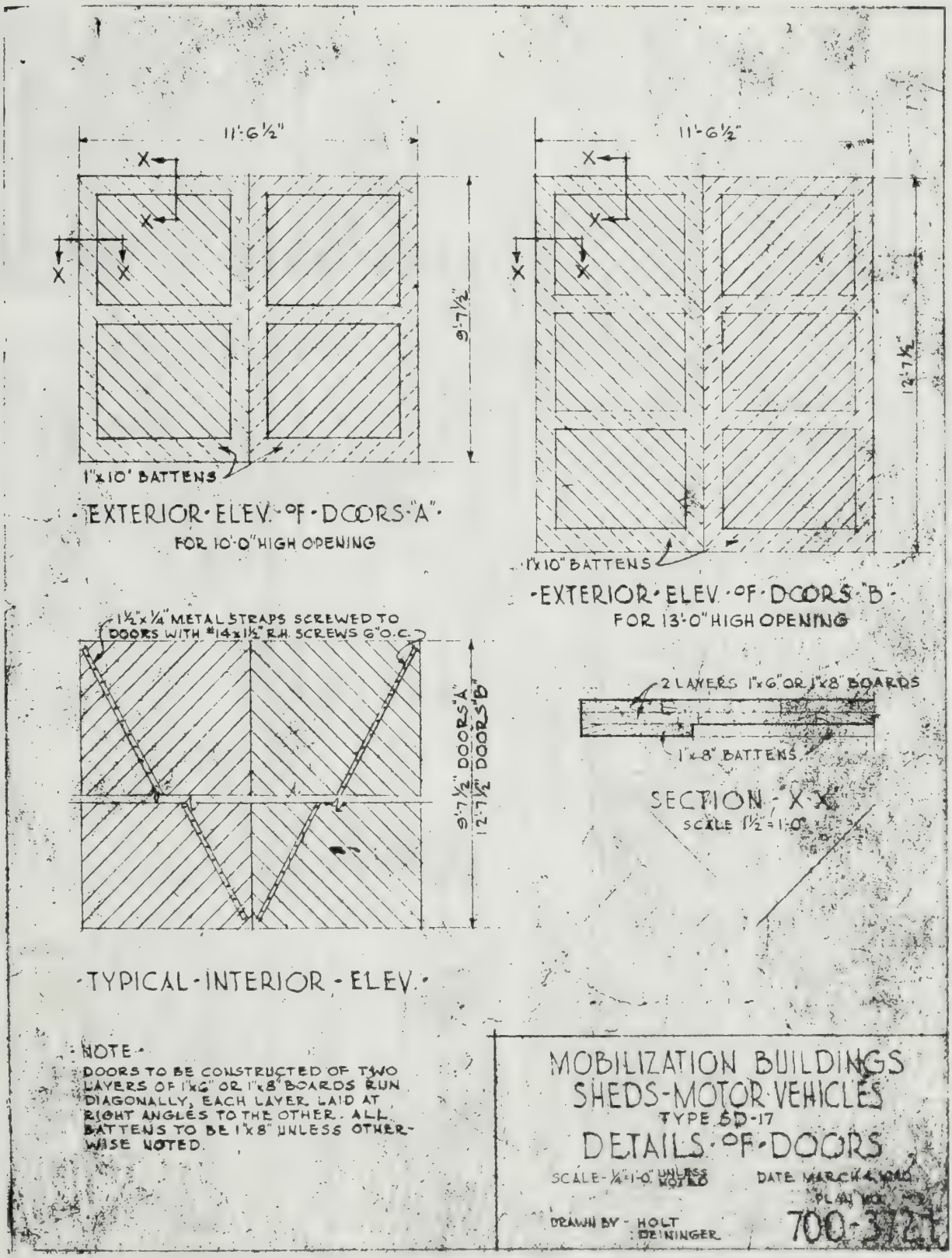
SCALE	CONSTRUCTION DIVISION
1/8 METRO	OFFICE OF THE QUARTERMASTER GENERAL
REVISIONS	MOBILIZATION BUILDINGS
Ⓐ 1-24-41	SHOP & MOTOR REPAIR (WHEEL ALIGNER)
	2ND ECHELON
	TYPE SP-2A
DRAWN BY	CHECKED BY
TRACED BY	APPROVED BY DIRECTION
DATE	11-20-40
PLAN NUMBER	700-314.1

Plan Number 700-314.1

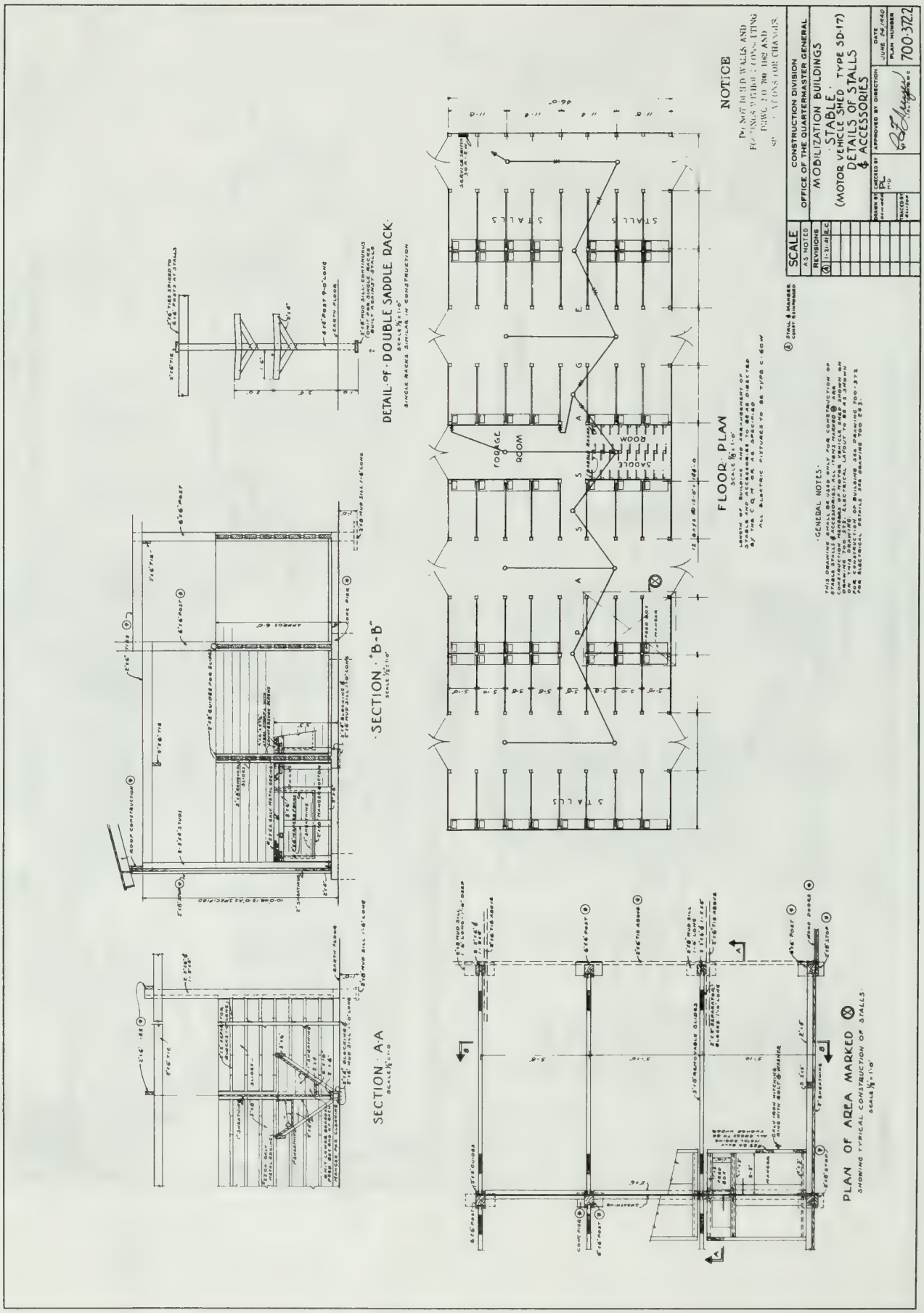
Plan Number 700-372

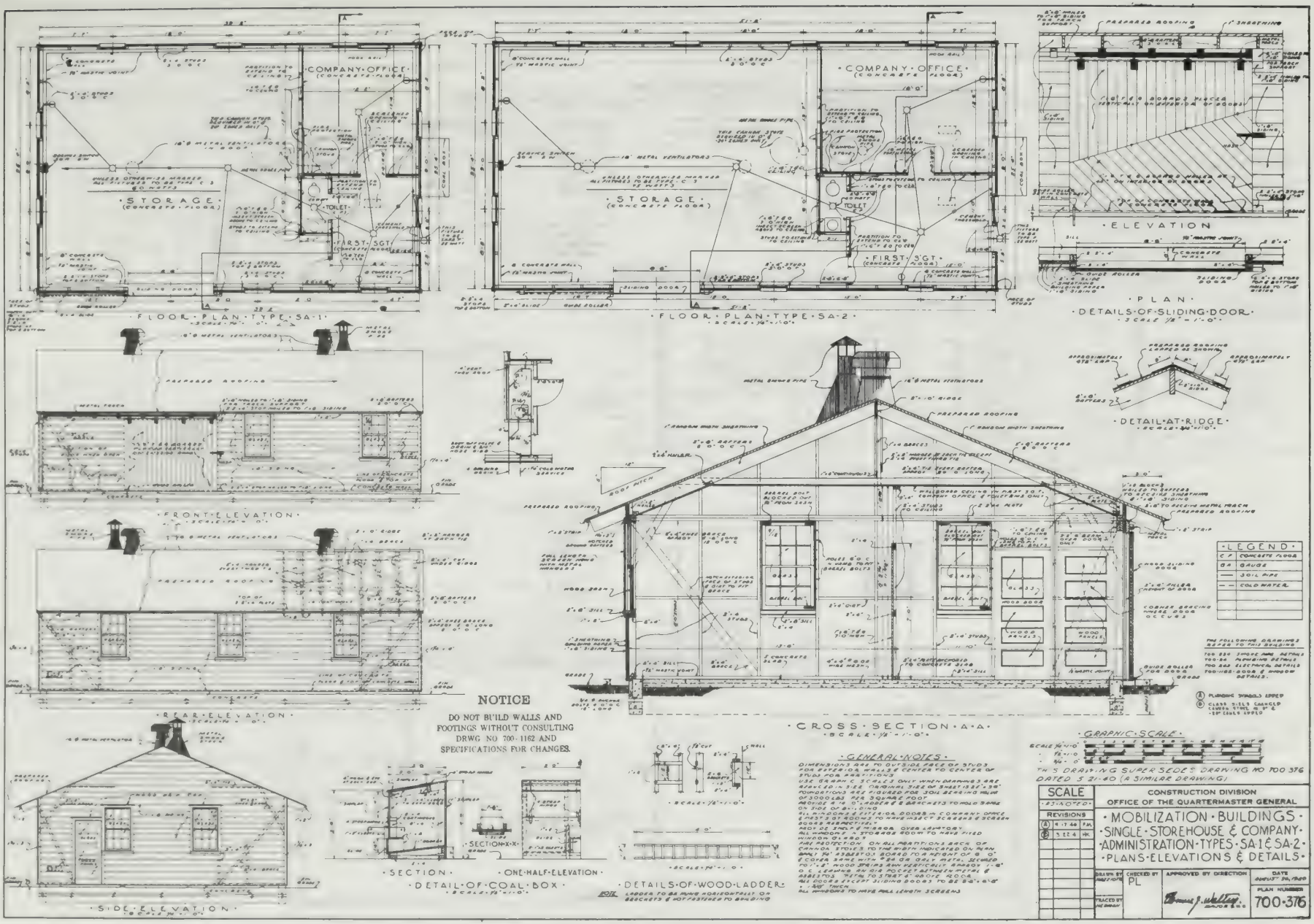


Plan Number 700-372.1



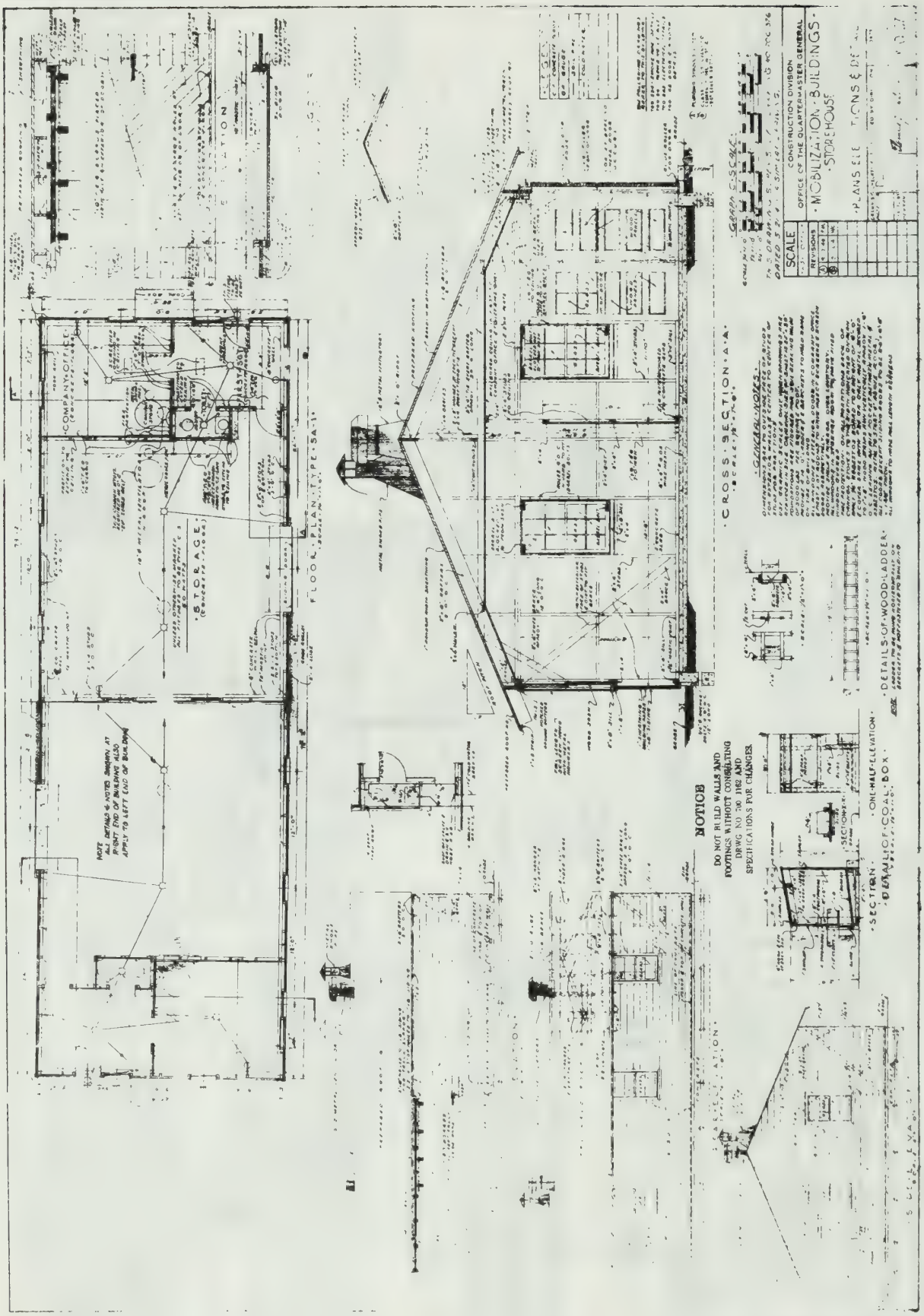
Plan Number 700-372.2





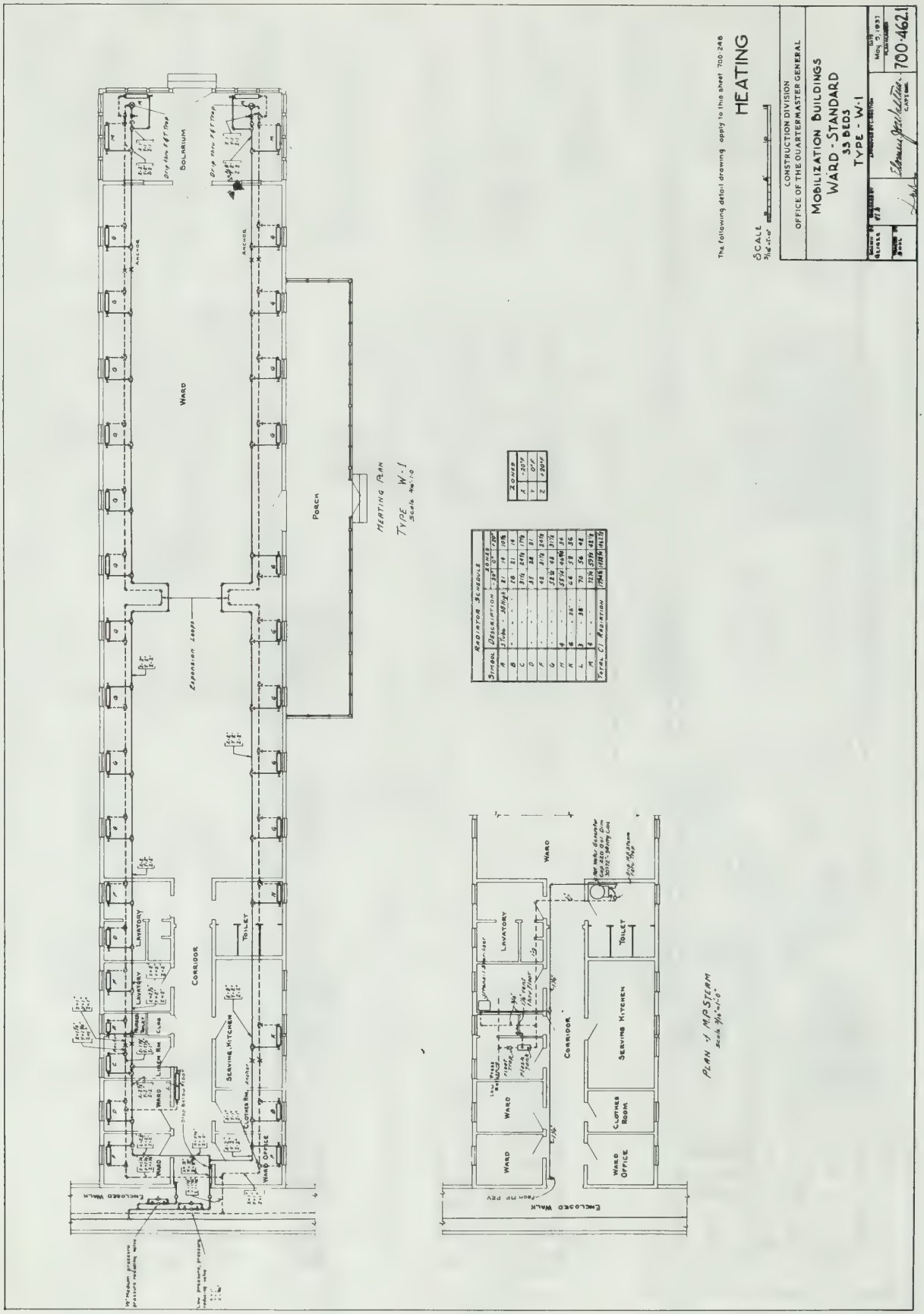
Plan Number 700-376

Plan Number 700-377

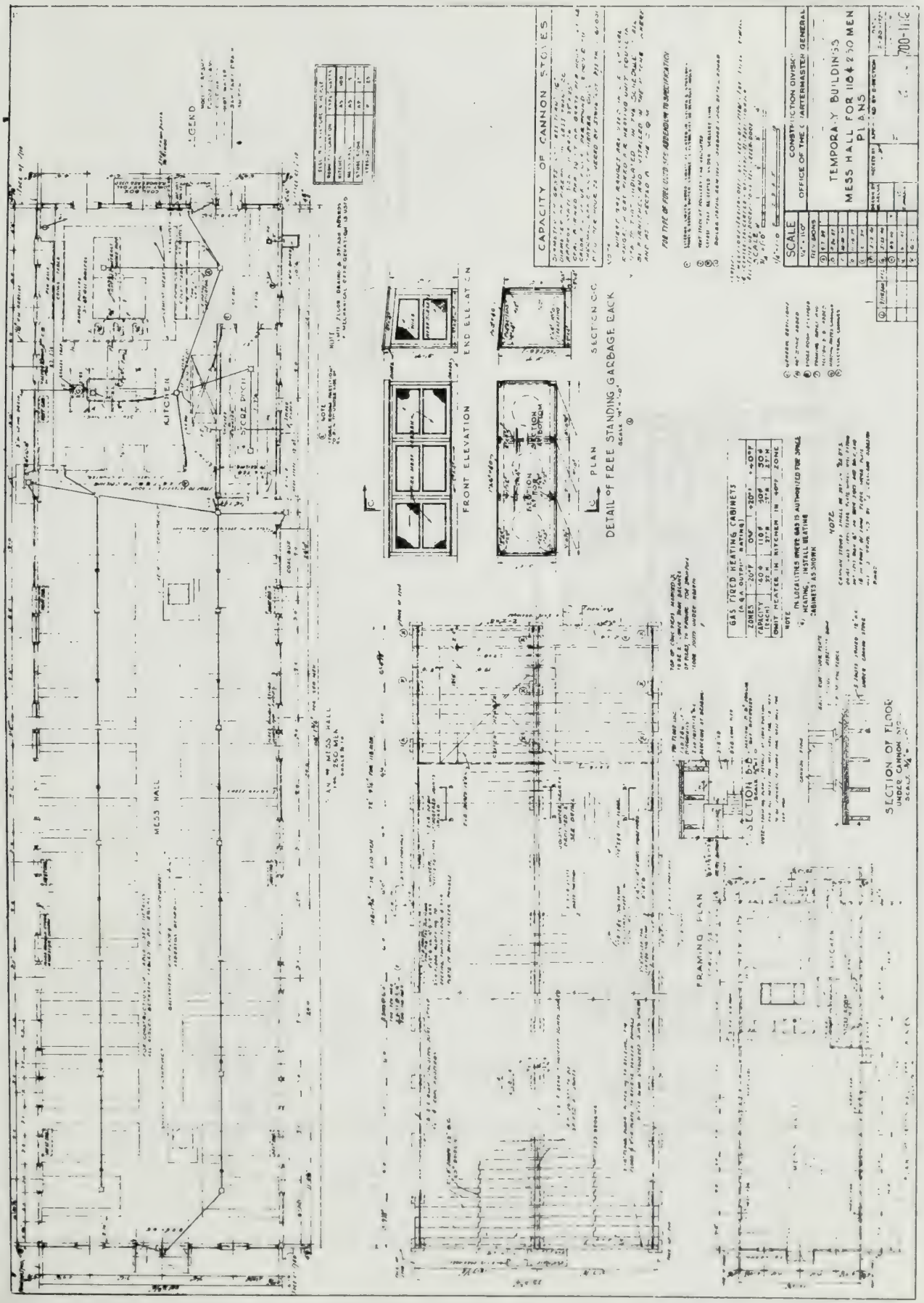


Plan Number 700-462

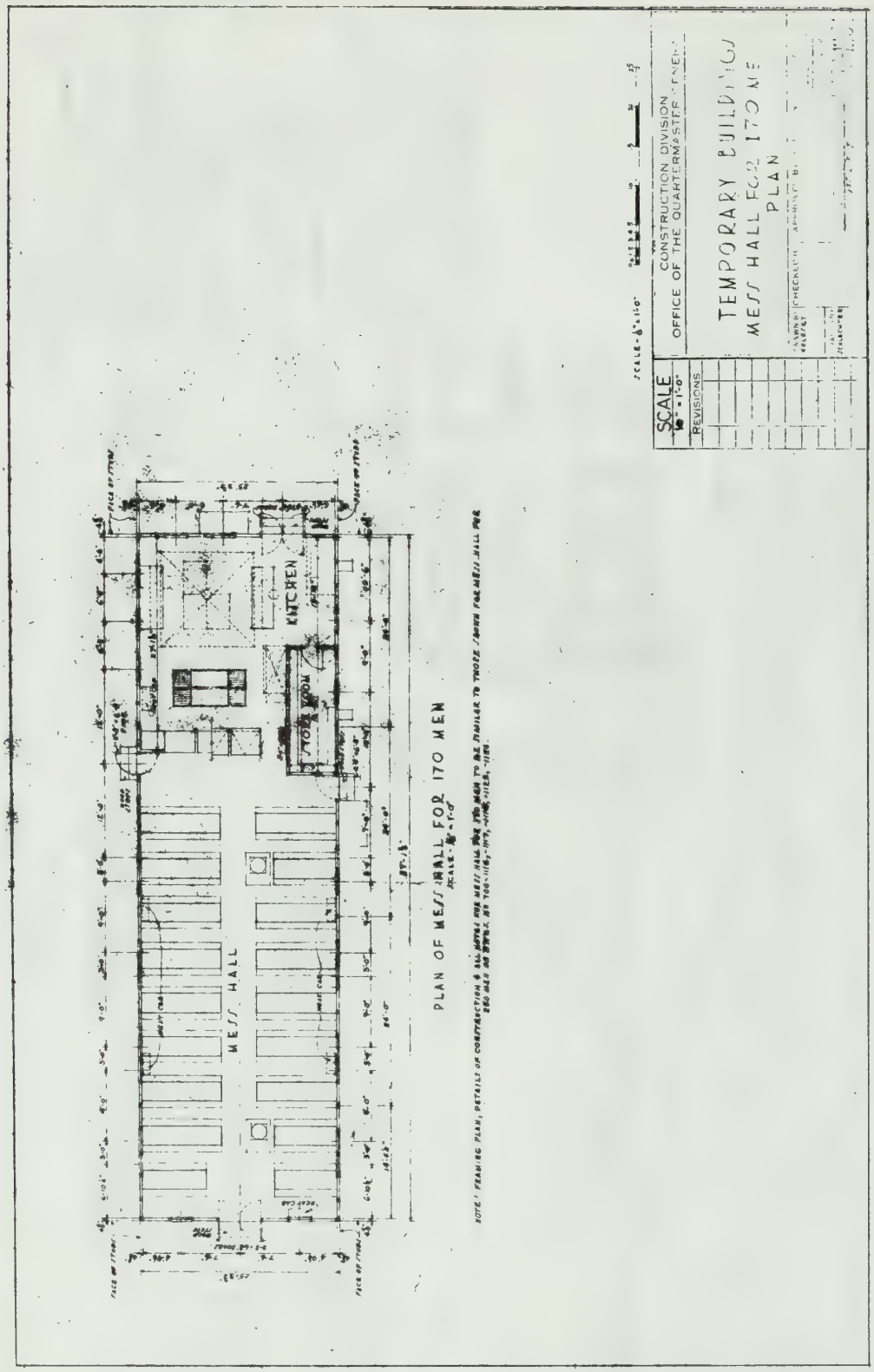
Plan Number 700-462.1



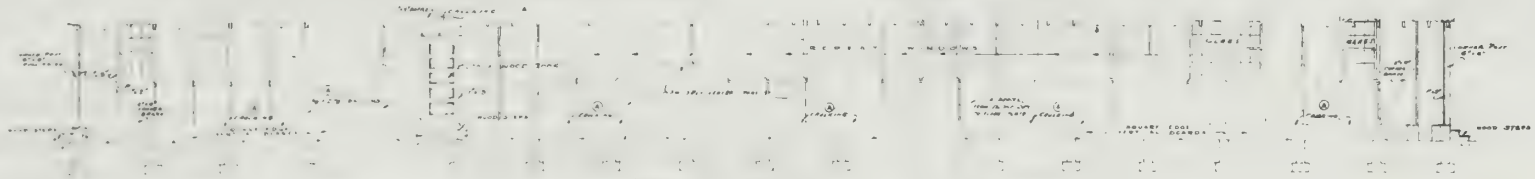
Plan Number 700-1116



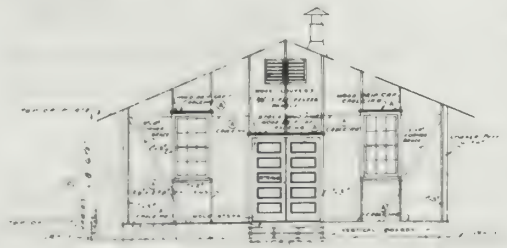
Plan Number 700-1116.1



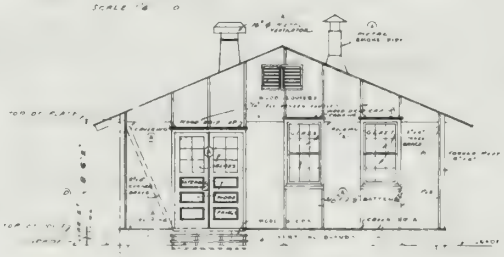
FRONT ELEVATION



REAR ELEVATION



MESS HALL END ELEVATION



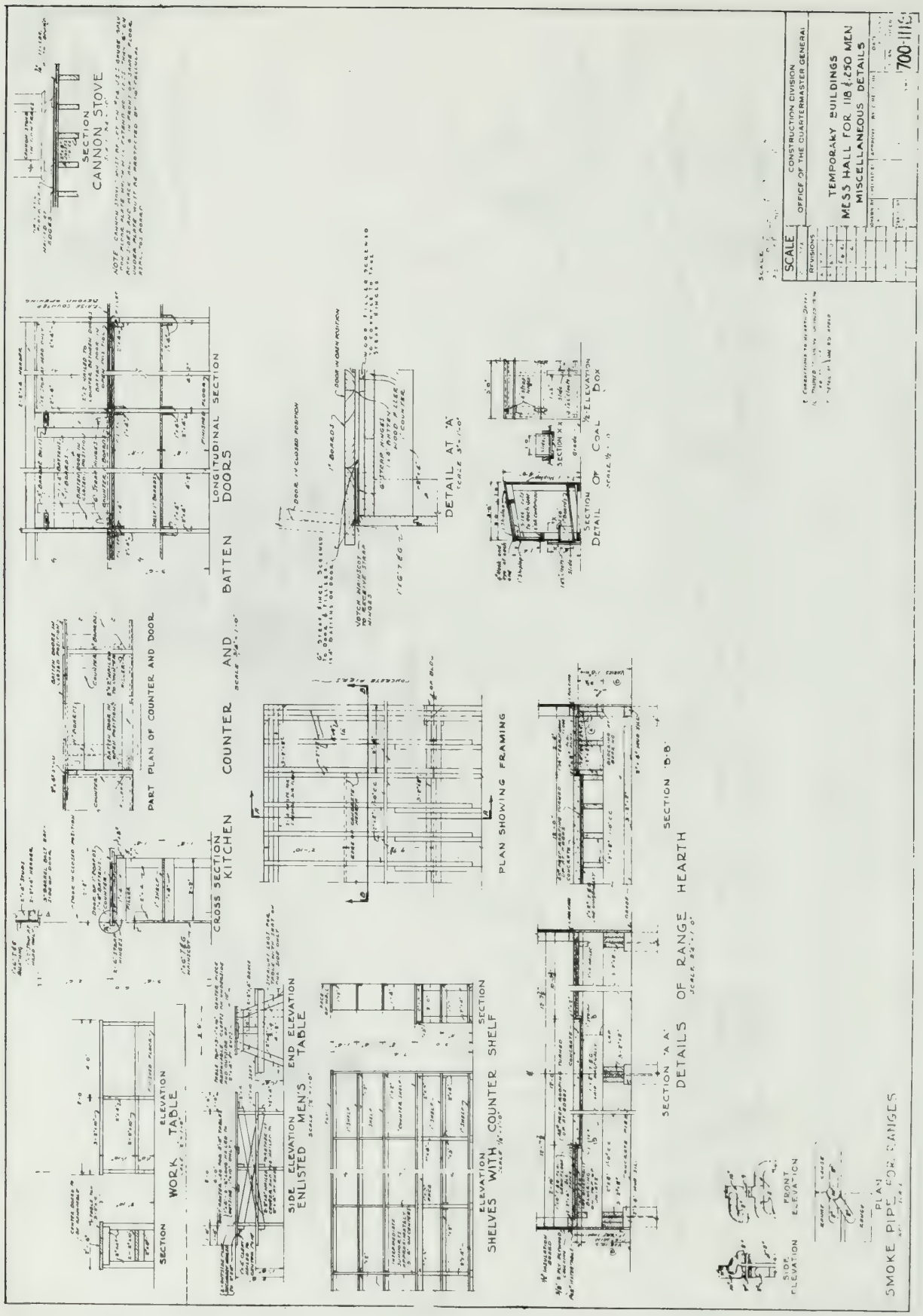
KITCHEN END ELEVATION

ELEVATIONS FOR 110 MEN MESS HALL SIMILAR — SEE PLANS

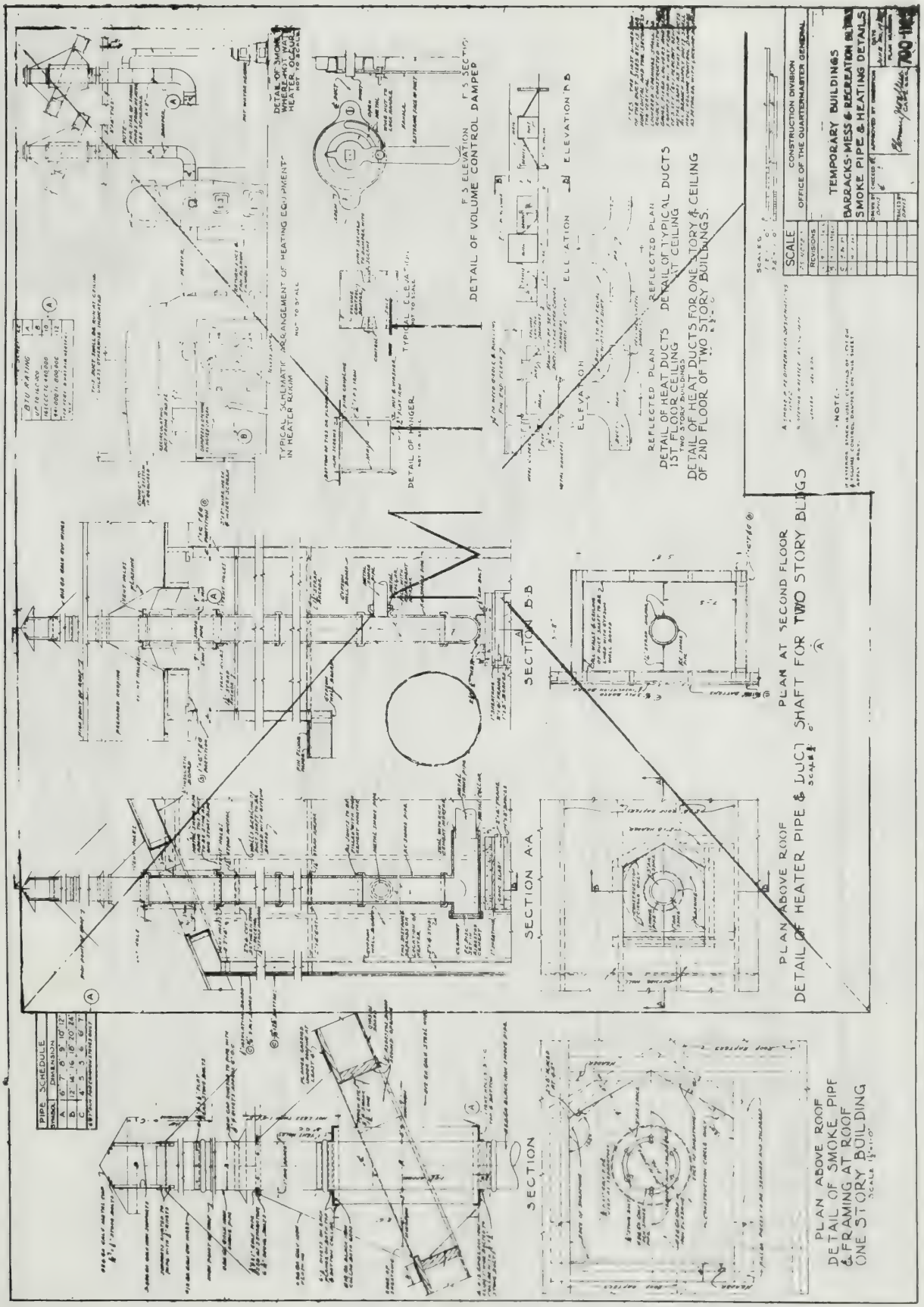
SCALE	CONSTRUCTION DIVISION OFFICE OF THE QUARTERMASTER GENERAL
REVISIONS A 9/7/39 B — — C — 9? D 12-7-40	TEMPORARY BUILDINGS MESS HALL FOR 250 MEN ELEVATIONS
DRAWN BY TRACED BY CHECKED BY APPROVED BY DIRECTION Florence J. Walker DATE JUNE 30 1940 PLAN NUMBER 700-1117	

Plan Number 700-1117

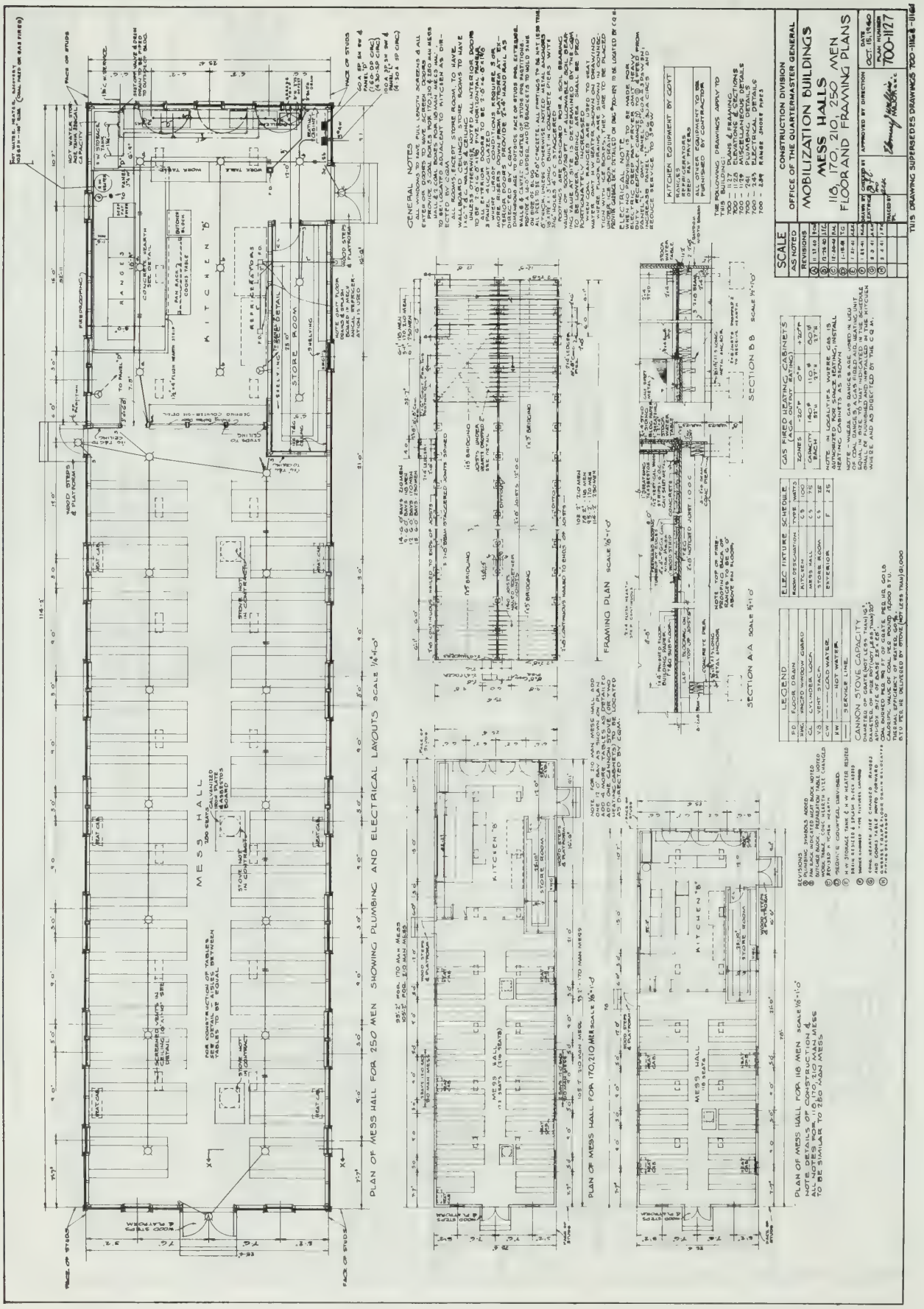
Plan Number 700-1118

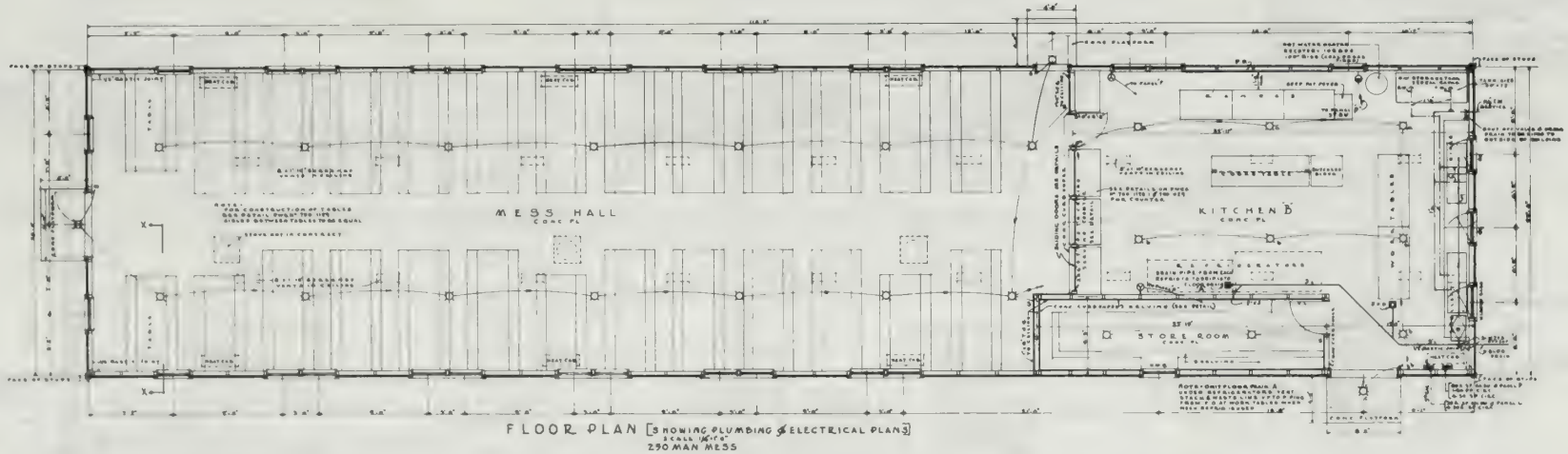


Plan Number 700-1125

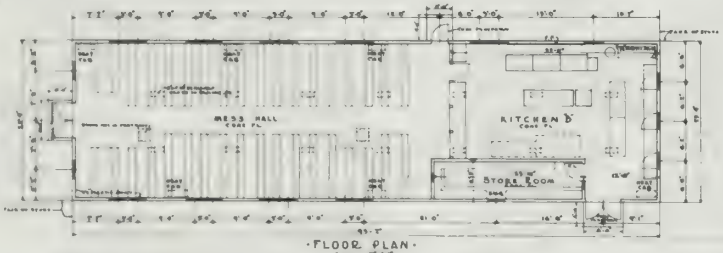


Plan Number 700-1127

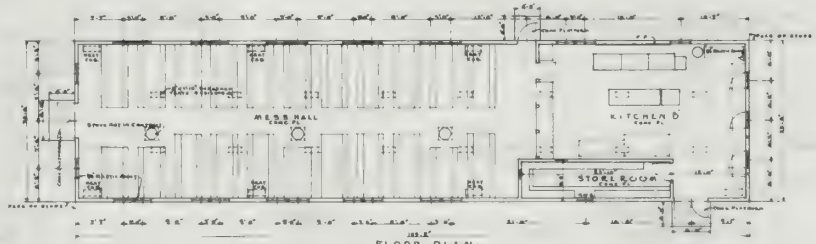




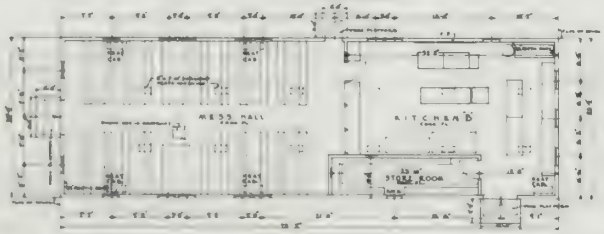
FLOOR PLAN [SHOWING PLUMBING & ELECTRICAL PLANS]
SCALE 1/8"=1'-0"
230 MAN MESS



FLOOR PLAN
SCALE 1/8"=1'-0"
170 MAN MESS



FLOOR PLAN
SCALE 1/8"=1'-0"
210 MAN MESS



FLOOR PLAN
SCALE 1/8"=1'-0"
118 MAN MESS

NOTE 2
CONSTRUCTION DETAILS & ALL NOTES FOR 230 MAN MESS TO APPLY TO 118, 170 & 210 MESS.

NOTE 1
THIS PLAN WILL BE USED IN ALL CASES IN LIEU OF 700-1127 WHERE GRADE WILL PERMIT WHERE GRADE IS SUCH THAT GROUND ELEVATION VARIES TO SUCH AN EXTENT THAT THIS TYPE OF CONSTRUCTION IS IMPRACTICABLE, PLAN 700-1127 WILL BE USED.

GENERAL NOTES:

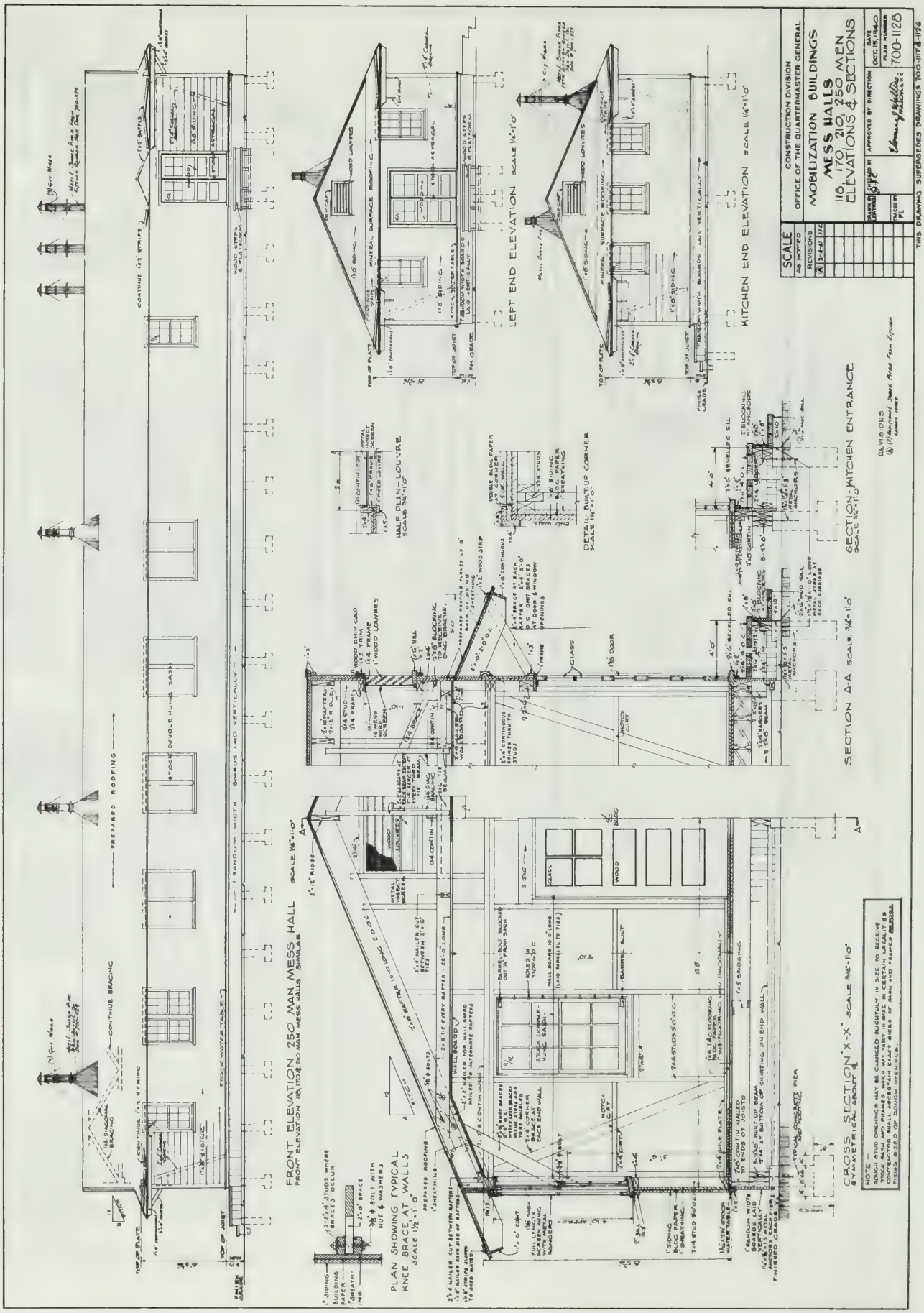
ALL WINDOWS TO HAVE FULL LENGTH SCREENS AND ALL EXTERIOR DOORS TO HAVE SCREEN DOORS PROVIDE THREE 3 COAL BOXES FOR EACH 170, 210 & 230 MAN MESS HALL AND TWO 2 COAL BOXES FOR 118 MAN MESS HALL TO BE LOCATED AS PLANT FACILITIES AS DIRECTED BY C.O.M.
ALL AROUND EXCEPT STORE ROOM TO HAVE WALL BOARD CEILING STORE ROOM TO HAVE 1/2 IN. T & G. WALLS & CEILING
UNLESS OTHERWISE NOTED ALL INTERIOR DOORS TO BE 2'-6"x6'-8"x 1 3/8" FIRE RESISTIVE PANELS ALL LATTICE DOORS TO BE 2'-6"x6'-8"x 1 3/8" 3 PANELS & LIGHTS GLAZED FOOTINGS ALL MESS HALL TO BE 1'-0" x 0'-8" REQUIRING WEIGHT OF 1000 LBS PER SQ FT IF ALLOWABLE SOIL BEARING LESS AT SITE IS DETERMINED BY C.O.M. TO BE LOWER DESIGN AREA SHALL BE INCREASED PROPORTIONATELY
WHEN COAL RANGES ARE USED TO HEAT WATER, UNIT BOY WATER HEATER SHOWN ON DRAWING WHEN FLOOR DRAINS ARE SHOWN IN CONNECTION WITH ALL BATHS, THEY ARE TO BE PIPED UNDER ICE BOX DRAIN
PASSIVE GREASE TRAP AS DETAILED ON DWG. NO. 700-1128 TO BE LOCATED AS C.O.M. MAY DIRECT ALL CHANGES TO BE MADE FROM PANEL 1 UNIT PANEL 1 FOR A 230-MAN MESS INCREASE PANEL 1 TO 3 BRANCHES AND CAPACITY SUFFICIENT TO SUPPLY

ELECTRICAL NOTES: WHERE NO PROVISION IS TO BE MADE FOR ELECTRIC DEEP FAT FRYER, UNIT HEATER WITH RECEPTACLE CHANGE (R) TO (A) AND FEED FROM PANEL 1 UNIT PANEL 1 FOR A 230-MAN MESS INCREASE PANEL 1 TO 3 BRANCHES AND CAPACITY SUFFICIENT TO SUPPLY

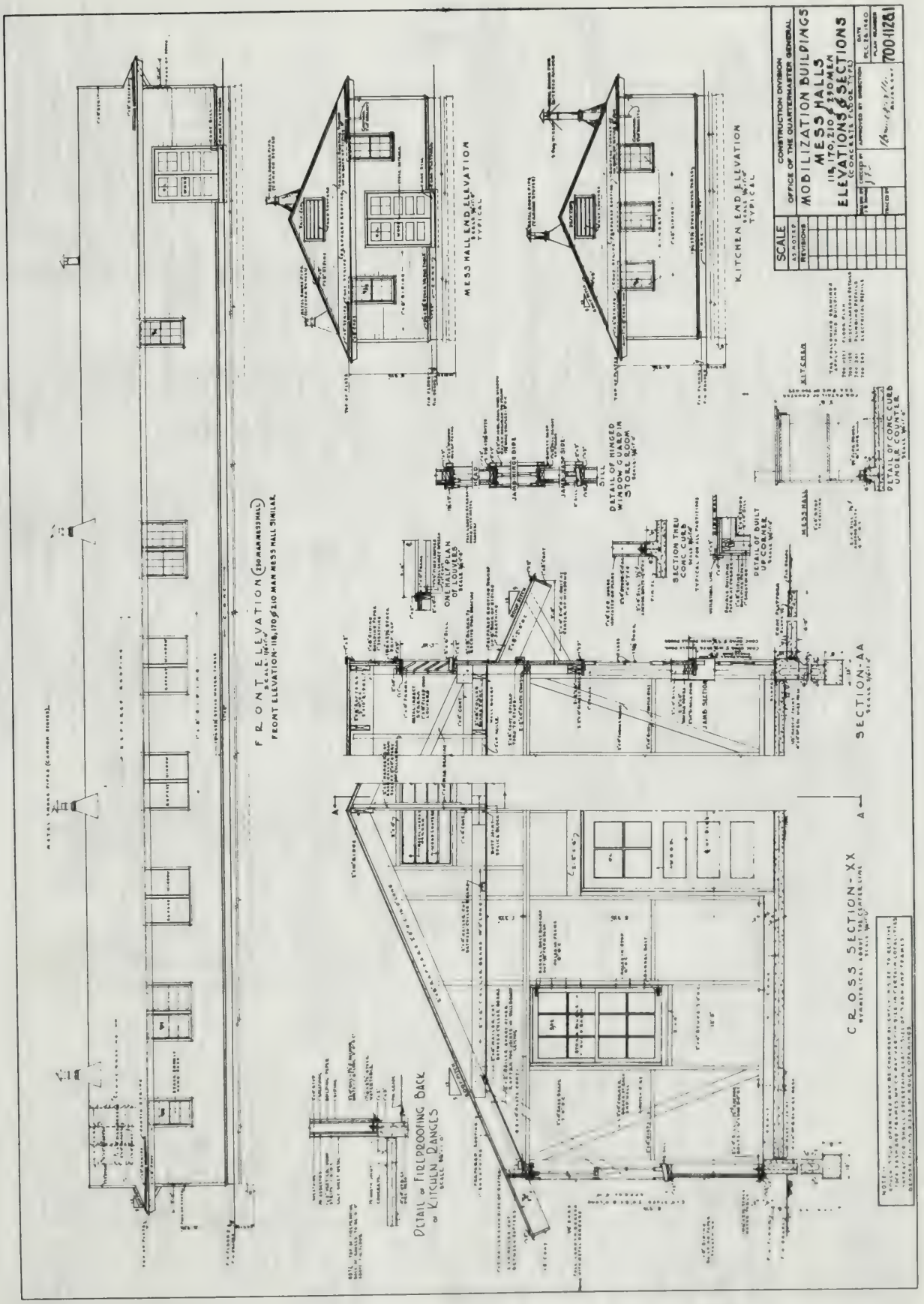
SCALE	CONSTRUCTION DIVISION
AS NOTED	OFFICE OF THE QUARTERMASTER GENERAL
REVISIONS	MOBILIZATION BUILDINGS
A 11/15/41 RC	MESS HALLS
B 1/15/42 RB	118, 170, 210 & 230 MEN
C 3-6-61 JFC	FLOOR PLANS
D 5-8-61 JFC	(CONCRETE FLOOR TYPE)
E 9-6-61 JFC	
F 8-8-61 JFC	
DRAWN BY J.S. JANUARY	CHECKED BY JFC
TRACED BY	APPROVED BY DIRECTION
	DATE DEC. 28, 1960
	PLAN NUMBER 700-1127.1

Plan Number 700-1127.1

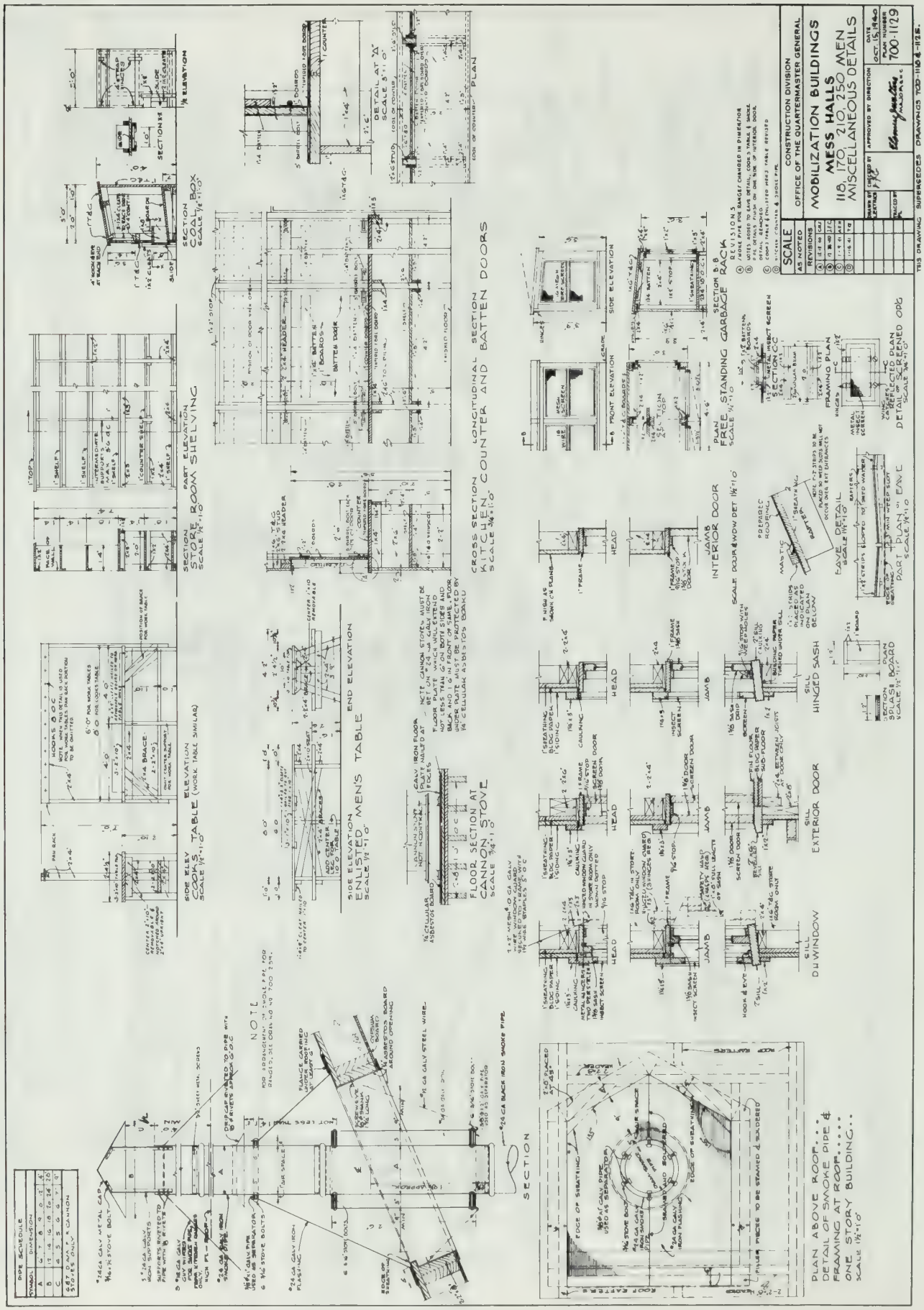
Plan Number 700-1128



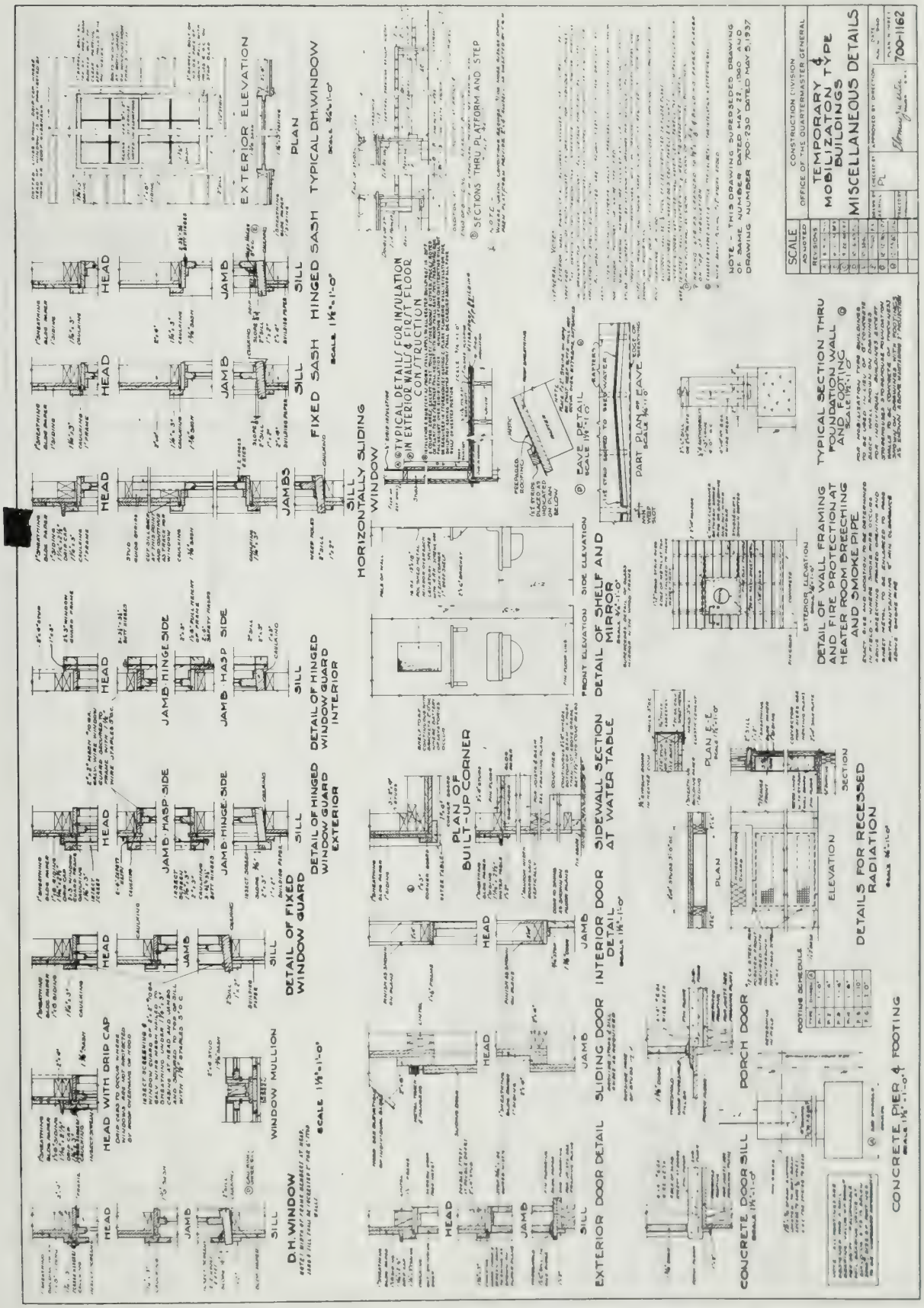
Plan Number 700-1128.1

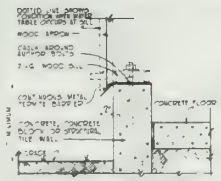


Plan Number 700-1129

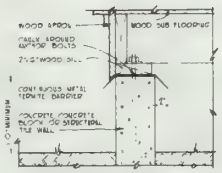


Plan Number 700-1162

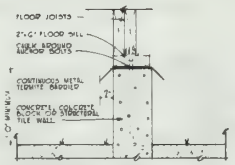




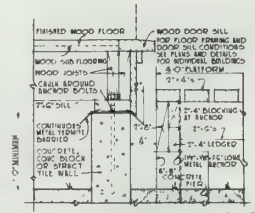
SECTION THRU EXTERIOR WALL
CONCRETE FLOOR CONSTRUCTION



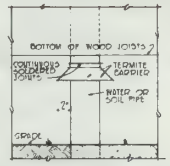
SECTION THRU EXTERIOR WALL
WOOD FLOOR CONSTRUCTION



SECTION THRU INTERIOR WALL
WOOD FLOOR CONSTRUCTION



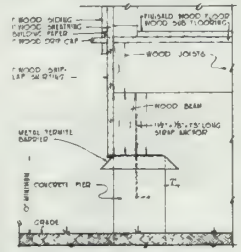
SECTION THRU EXTERIOR WALL
FLOOR CONSTRUCTION AT DOOR SILL



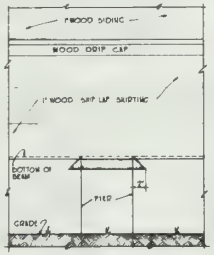
DETAIL OF TERMITE BARRIER
FOR PIPE RISER

DETAIL OF TERMITE BARRIERS AT WOOD WALL CONSTRUCTION ON MASONRY FOUNDATION WALLS

SCALE 1½"=1'-0"



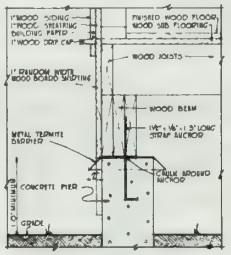
SECTION LOOKING AT PIER



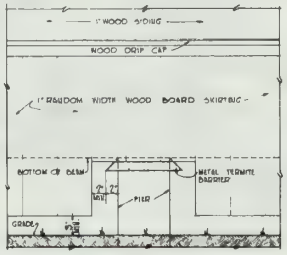
ELEVATION AT PIER

DETAIL OF TERMITE BARRIERS AT WOOD CONSTRUCTION ON MASONRY PIERS FOR +20° FAHRENHEIT ZONE

SCALE 1½"=1'-0"



SECTION THRU PIER



ELEVATION AT PIER

DETAIL OF TERMITE BARRIER AT WOOD CONSTRUCTION ON MASONRY PIERS FOR 0° AND -20° FAHRENHEIT ZONE

SCALE 1½"=1'-0"

GENERAL NOTES

PLATFORM AND STEP STRUCTURE TO BE PLACED 4" AWAY AND TO BE CONSTRUCTED INDEPENDENTLY OF BUILDING STRUCTURE AS SHOWN AND IS NOT PLACE TO BE IN CONTACT WITH BUILDING STRUCTURE. WHERE RAILING IS NECESSARY PROVIDE WHEELS SO THAT 3" CLEARANCE BETWEEN RAILING AND BUILDING WILL BE MAINTAINED

TERMITE BARRIERS TO BE CONTINUOUSLY AROUND PORTION OF BUILDING HAVING CONCRETE POURED ON WALLS AND POSITION OF BARRIERS TO BE MAINTAINED AT ALL POINTS

DETAILS FOR EVERY CONDITION ARE NOT INCLUDED, BUT DETAILS SHOWN SHALL BE USED AS A GUIDE FOR ALL TERMITE PROTECTION

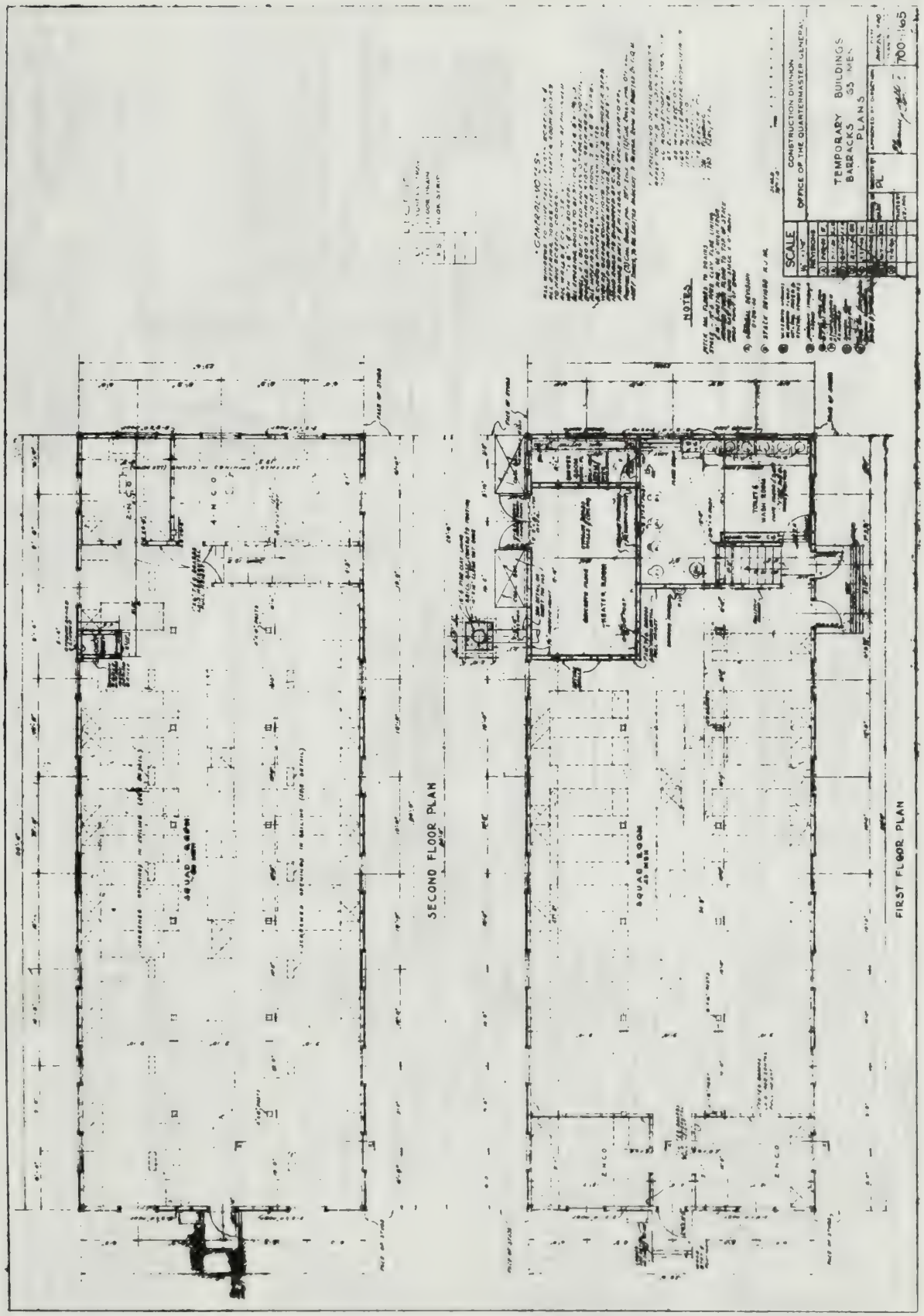
ALL TERMITE BARRIERS SHALL BE 22G GAUGE GALVANIZED METAL

DETAILS ON THIS SHEET APPLY FOR TERMITE BARRIERS AND ONLY THOSE CONSTRUCTION DETAILS THAT ARE INCIDENTAL TO TERMITE PROTECTION

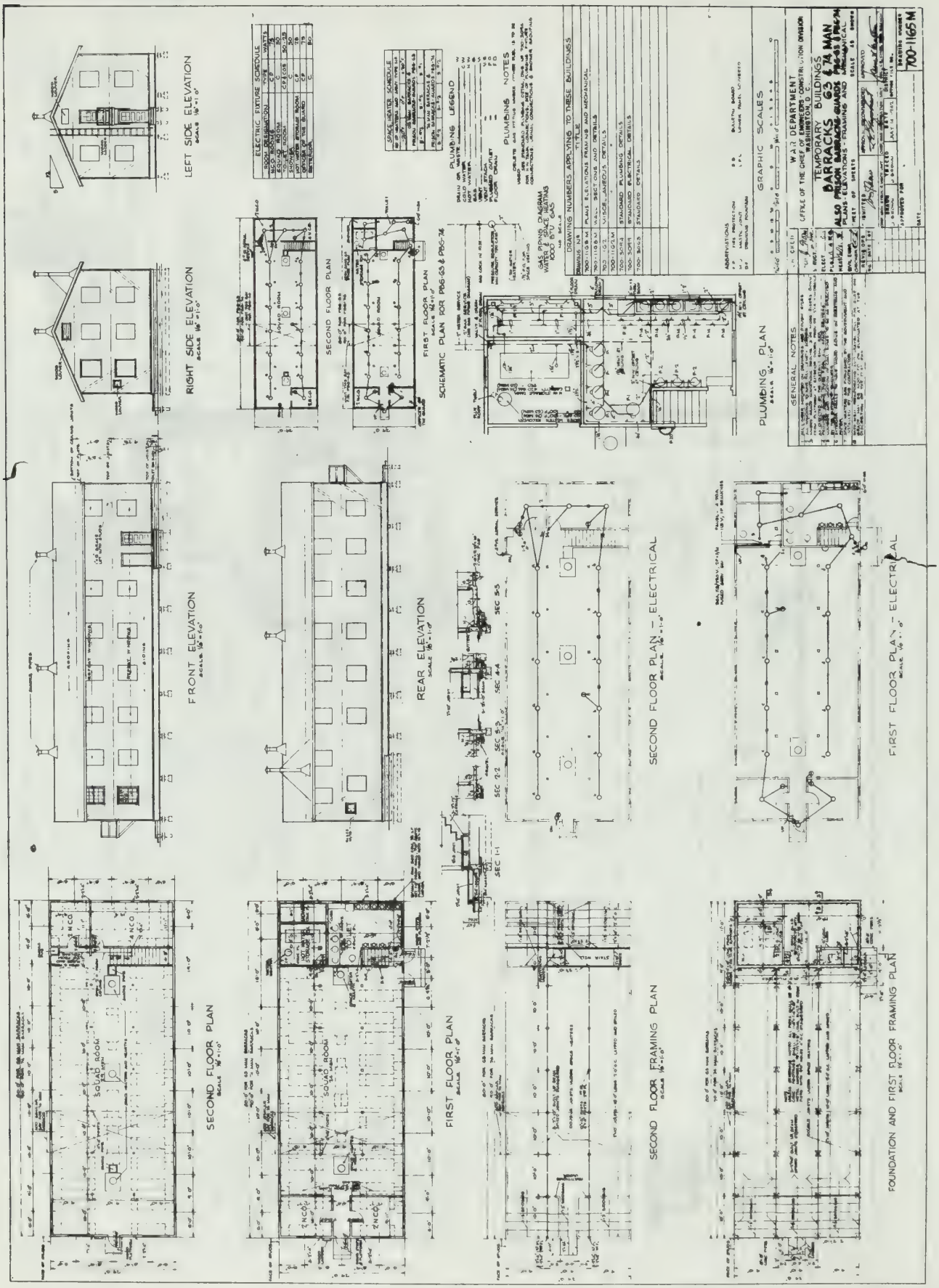
THIS DRAWING SUPERSEDES DRAWINGS OF SAME NUMBER DATED JUNE 5, 1940 AND SEPTEMBER 19, 1940

SCALE	CONSTRUCTION DIVISION OFFICE OF THE QUARTERMASTER GENERAL	
1½"=1'-0"	MOBILIZATION BUILDINGS TYPICAL DETAILS FOR TERMITE PROTECTION	
REVISIONS	DRAWN BY: STANDLEY TRACED BY: DESSLER CHECKED BY: [illegible] APPROVED BY DIRECTION: Hugh Gasser, MAJOR, C.E.	DATE: JANUARY 31, 1941 PLAN NUMBER: 700-1163

Plan Number 700-1165



Plan Number 700-1165M



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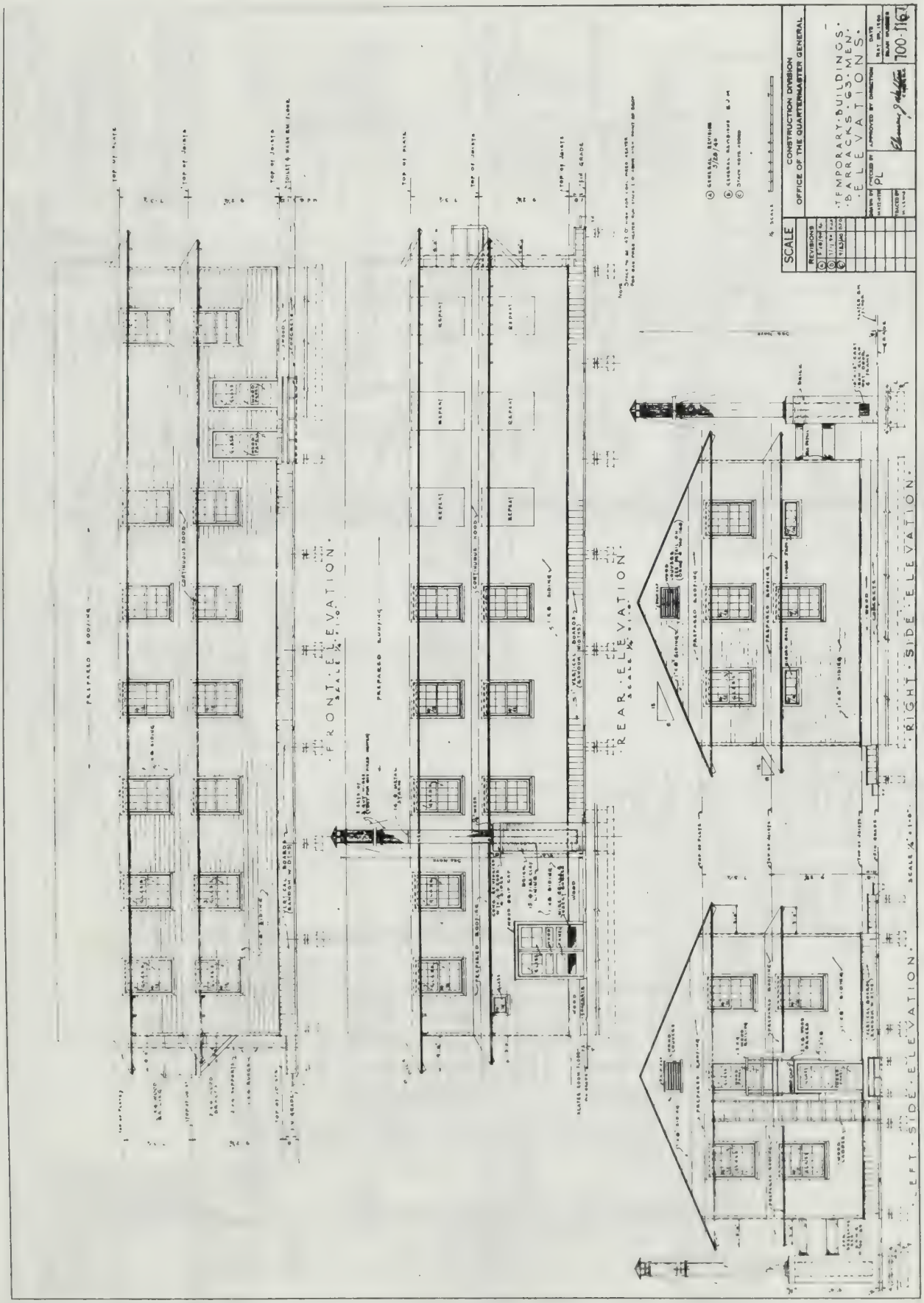
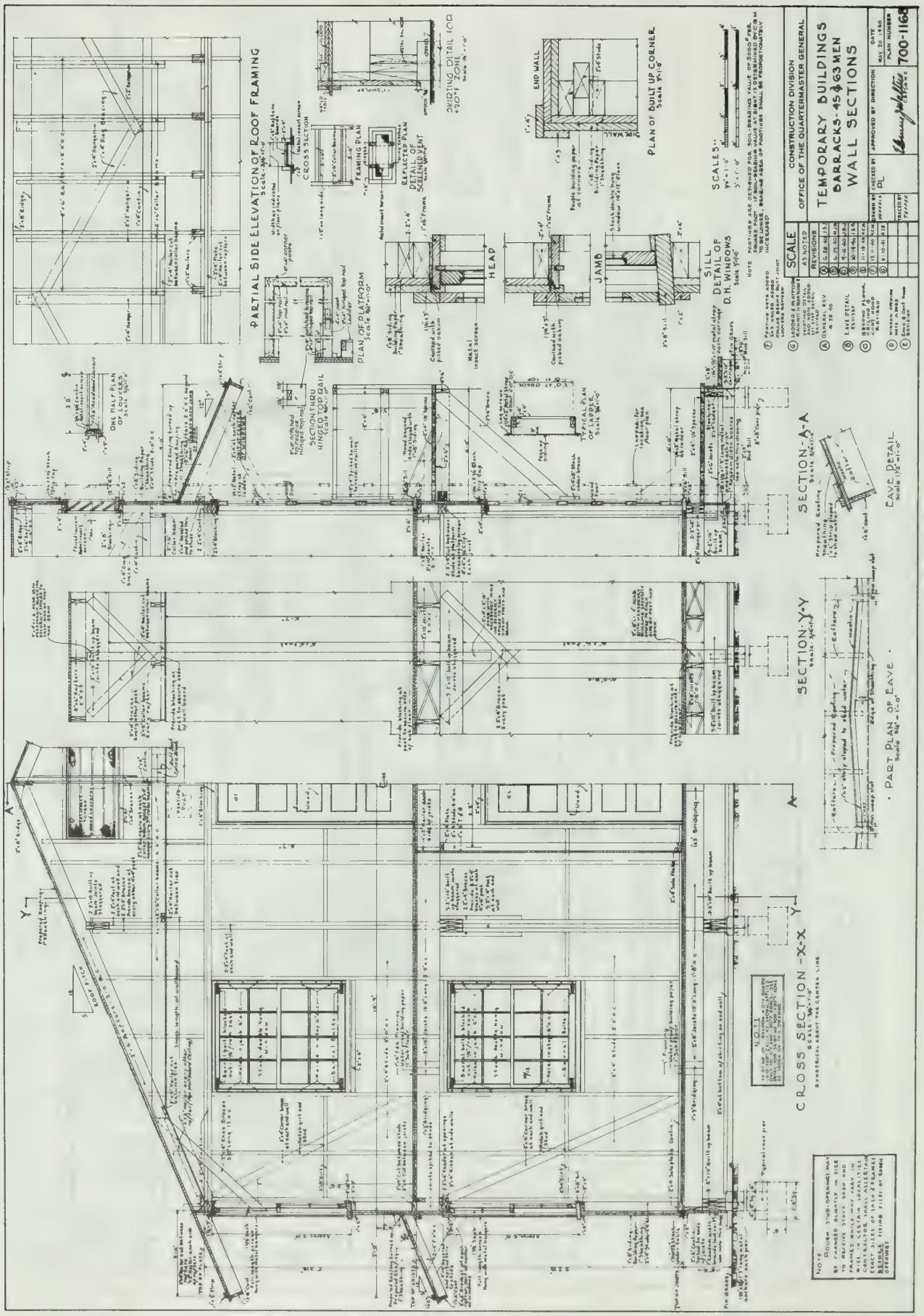


Plan Number 700-1168



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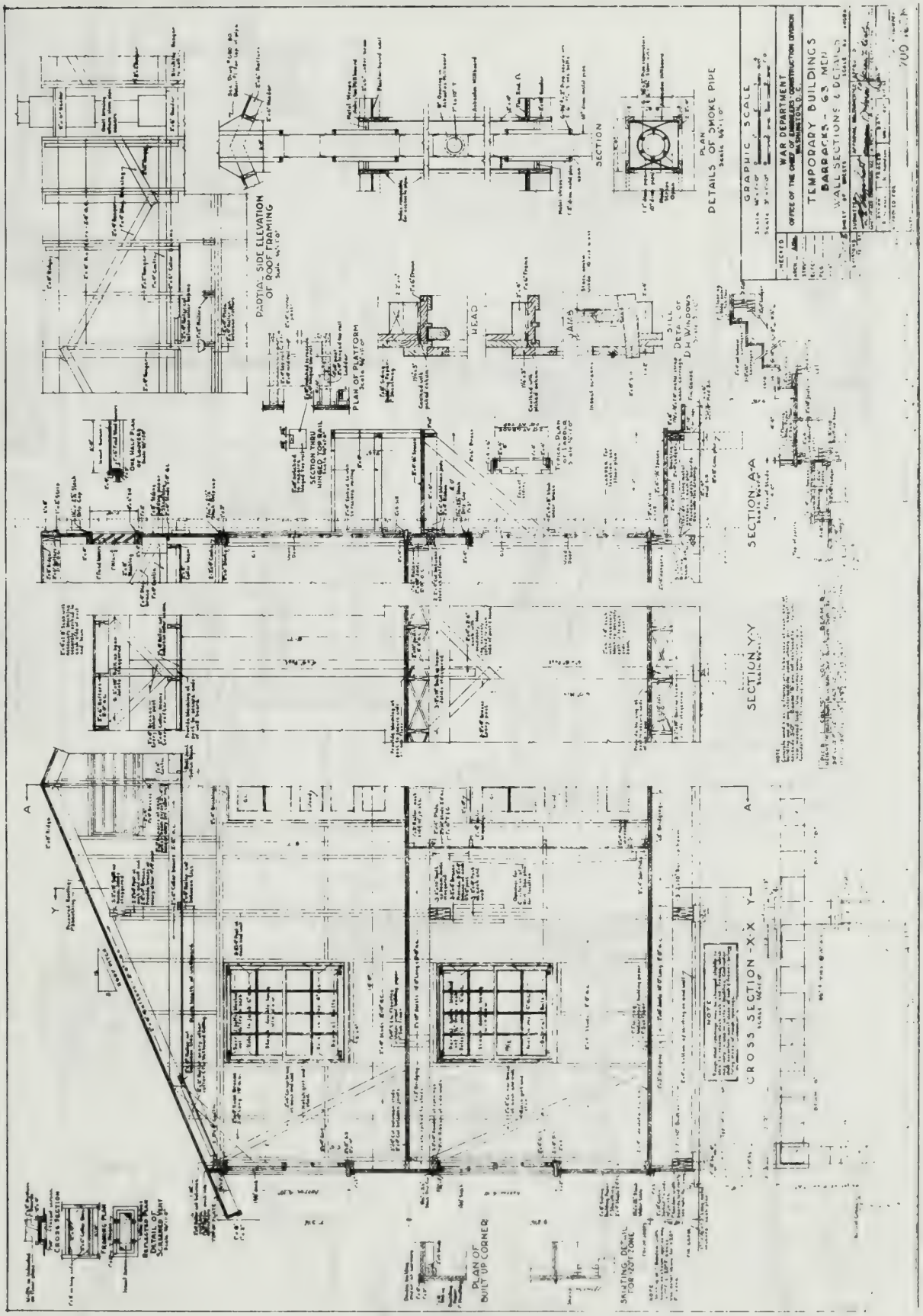

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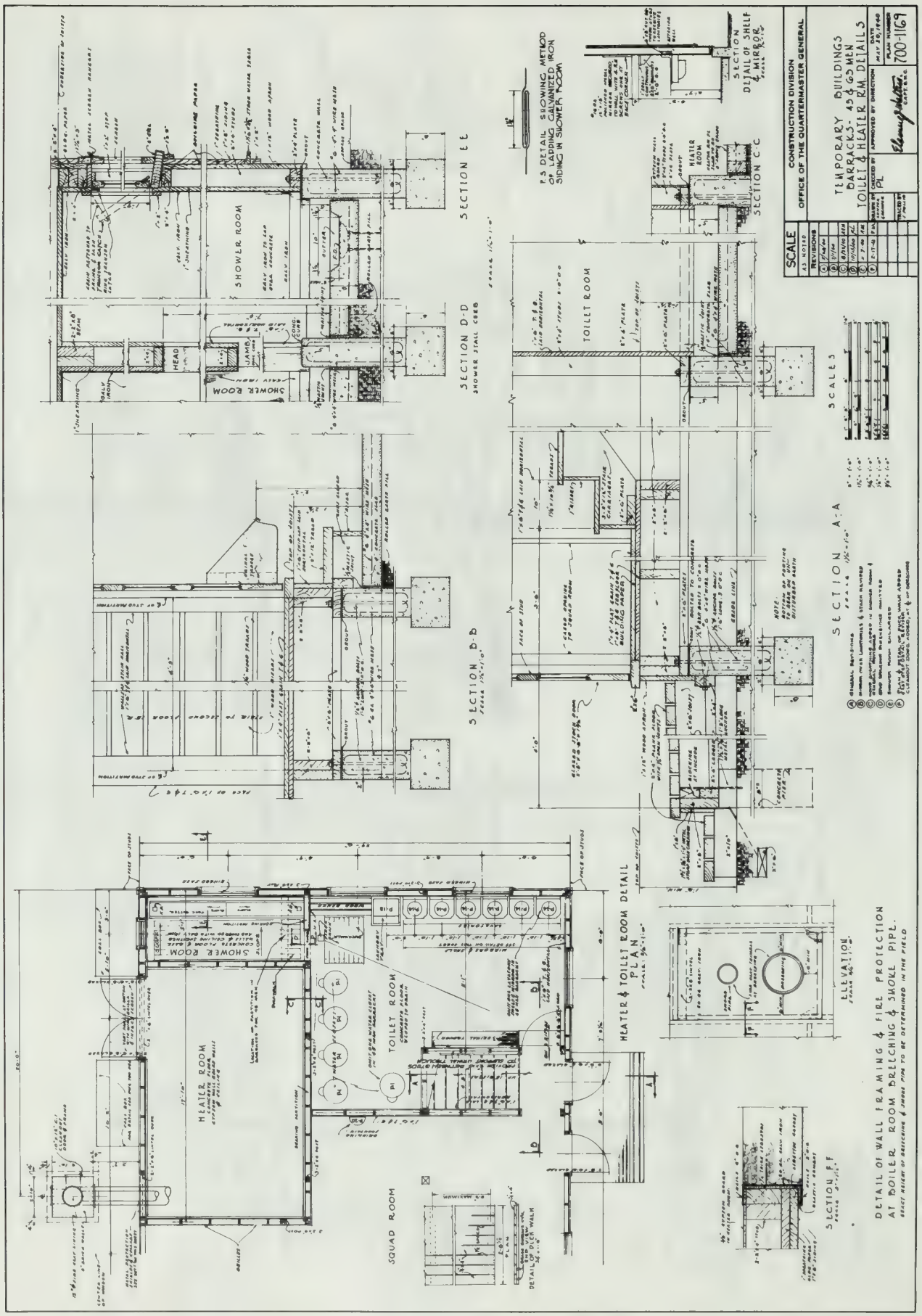

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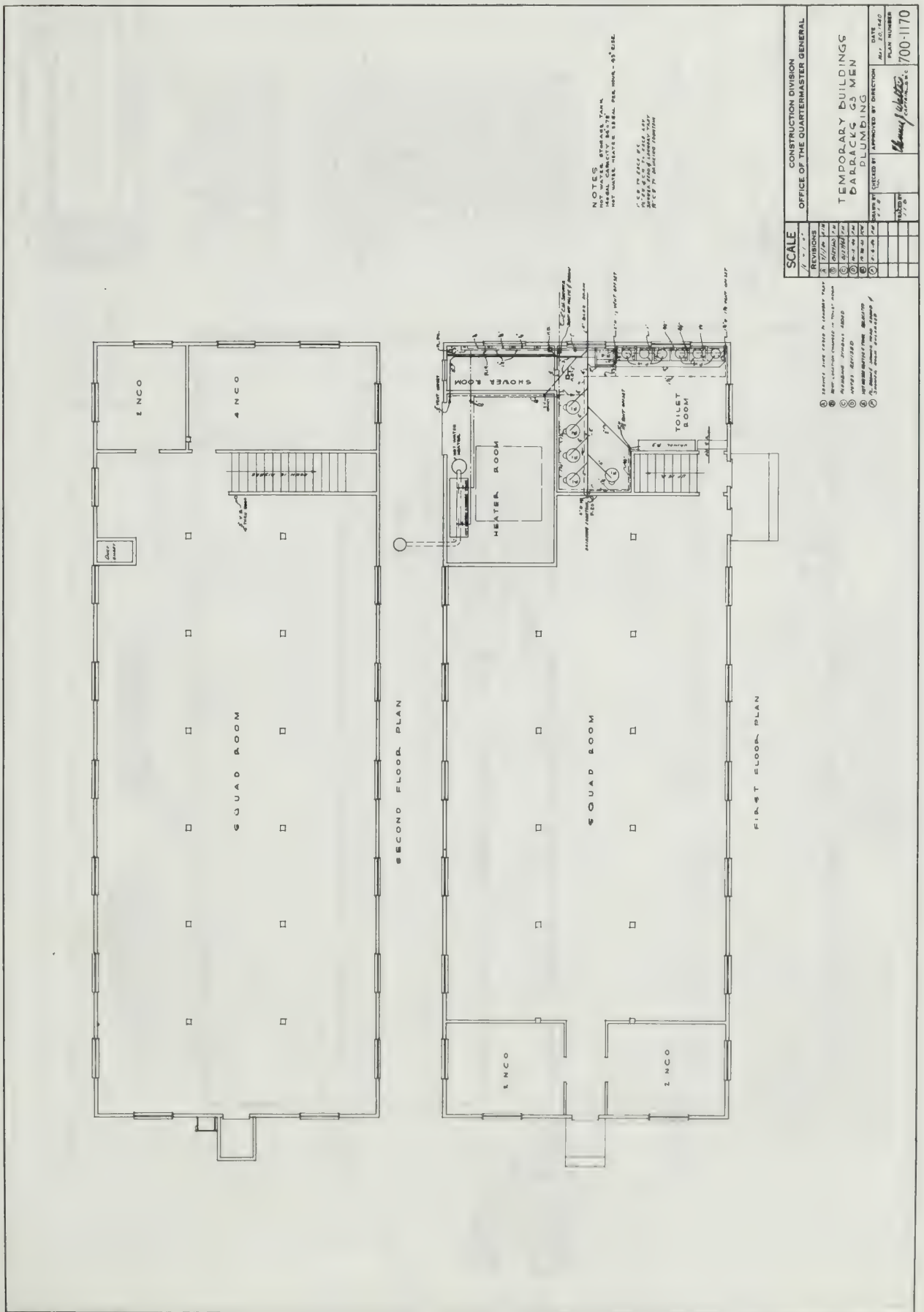

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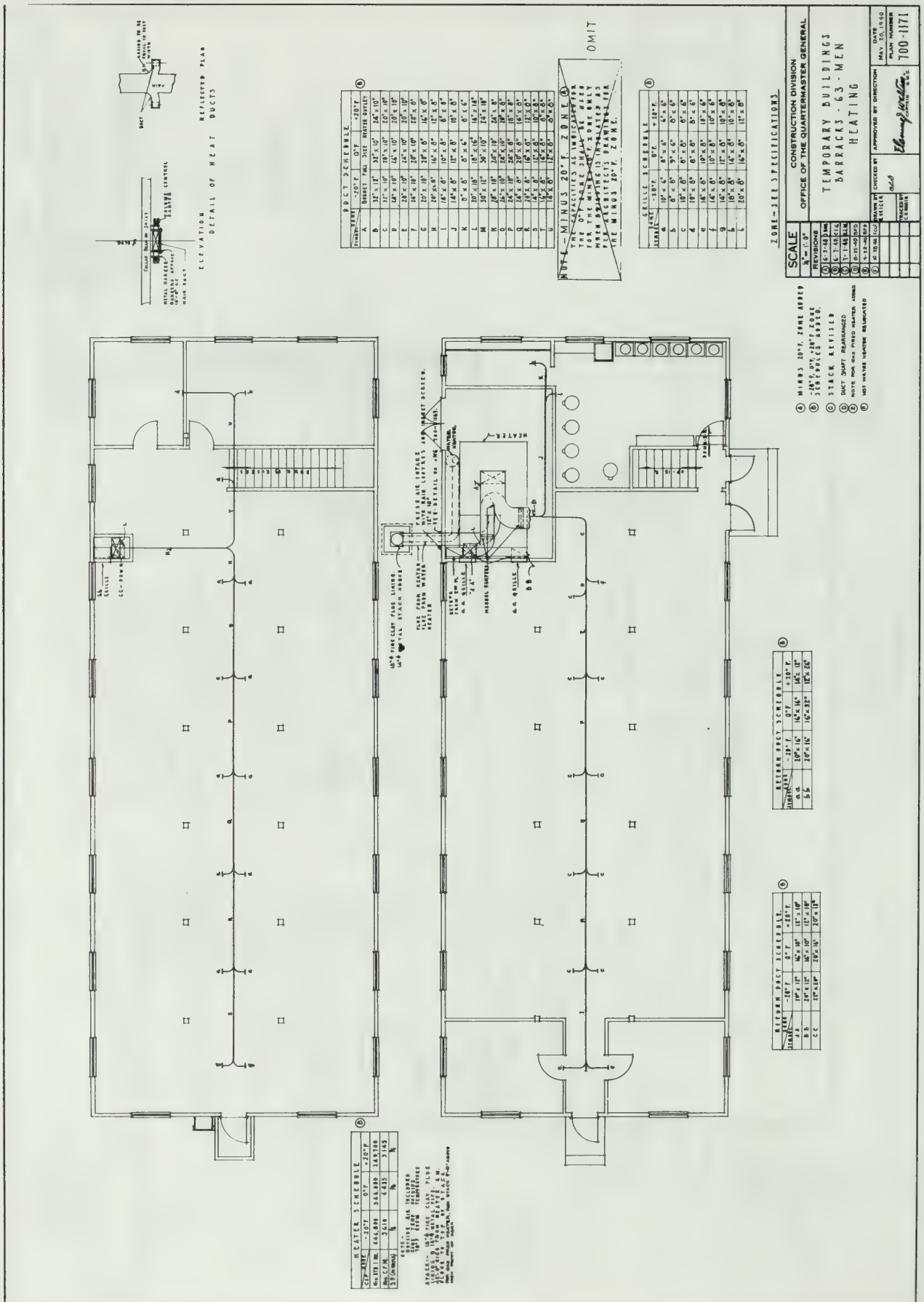
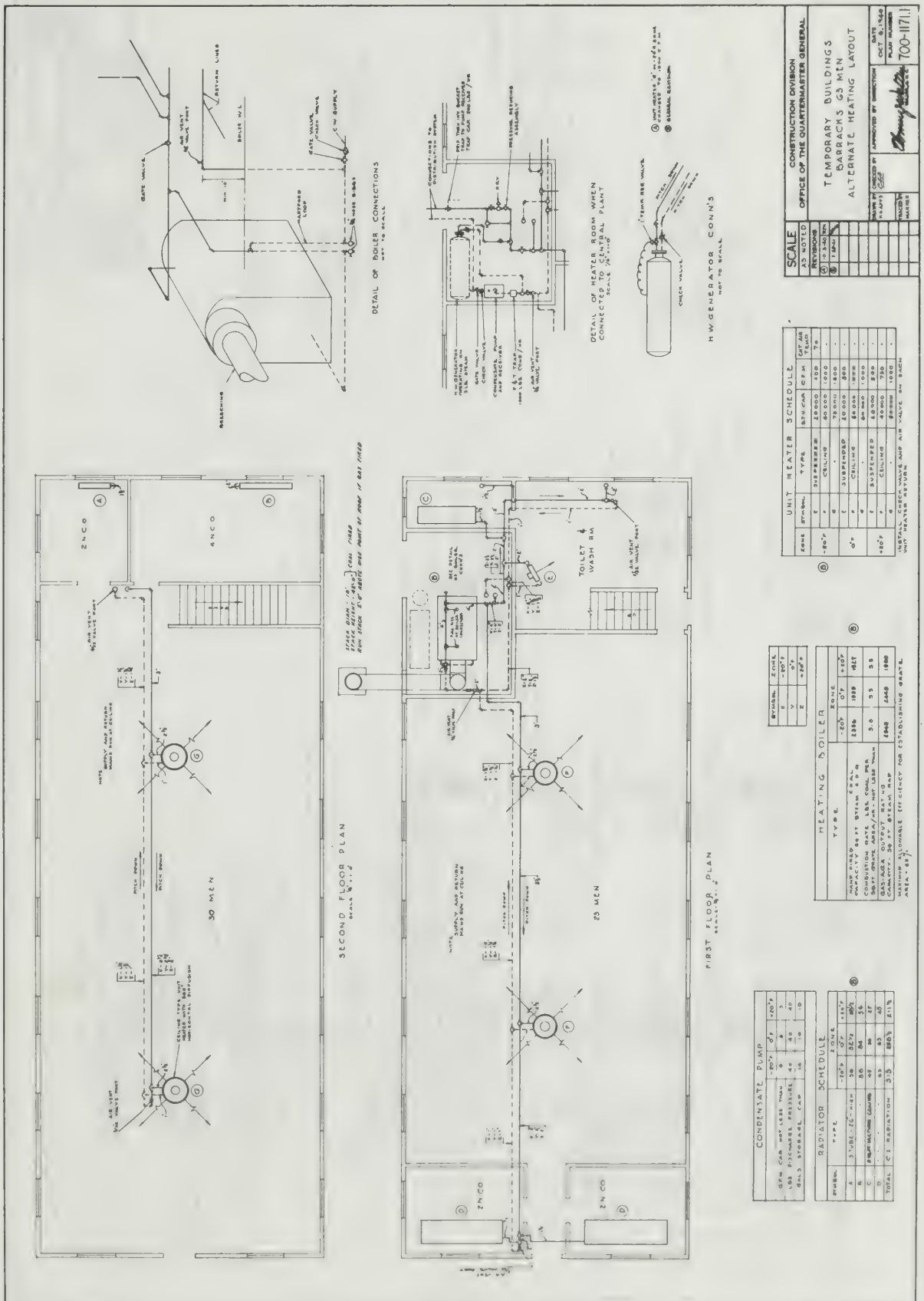


Plan Number 700-1171.1



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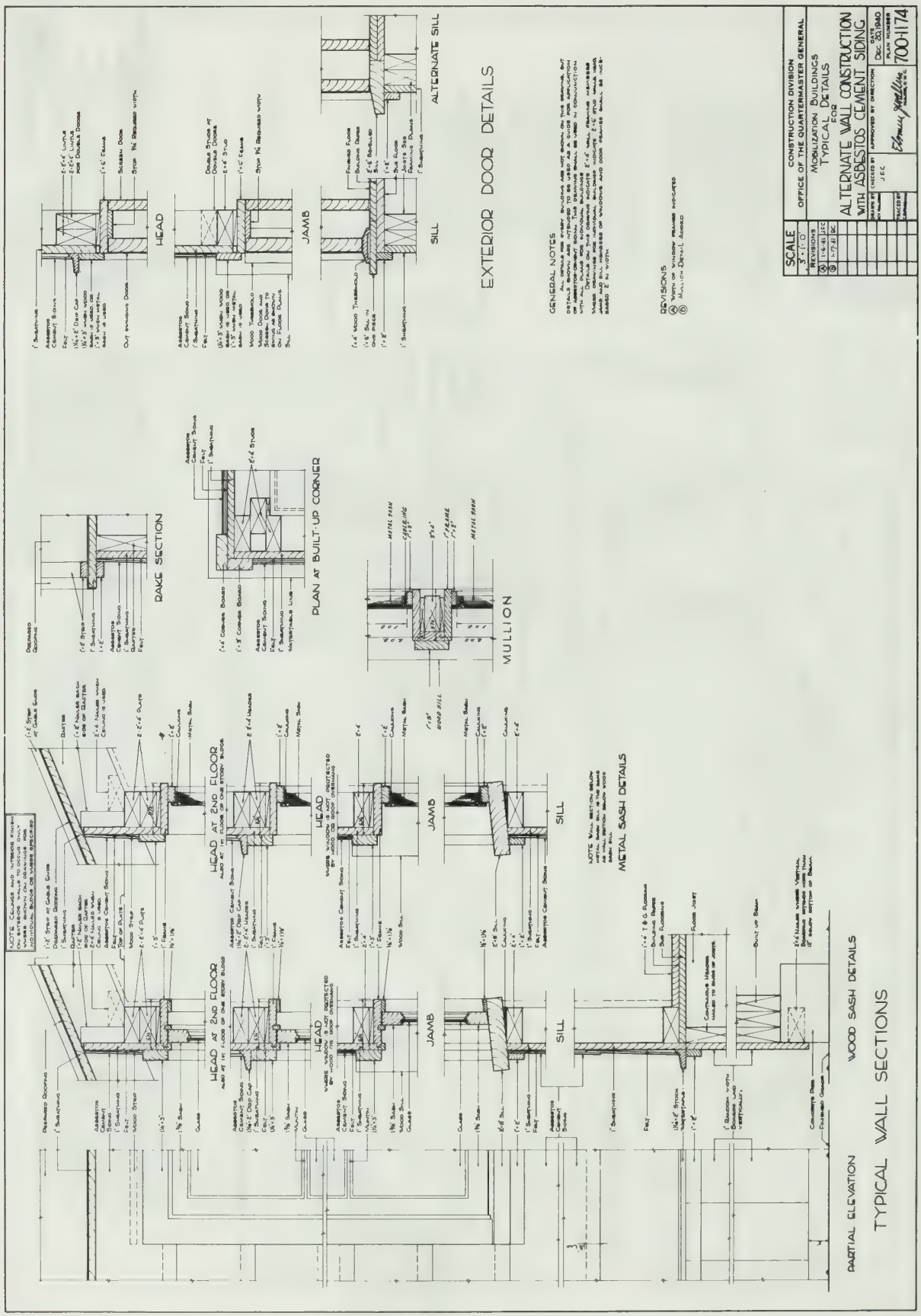

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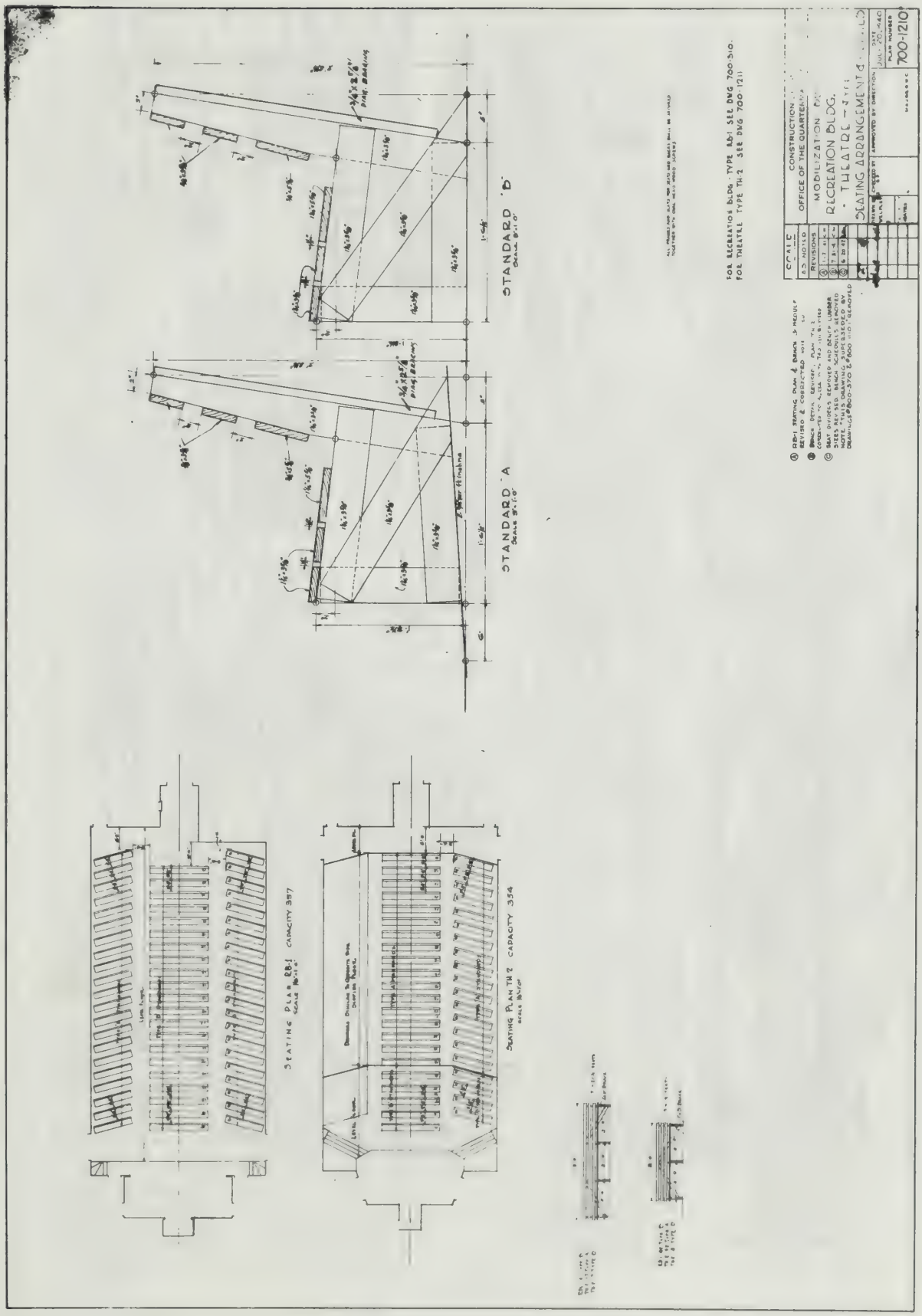

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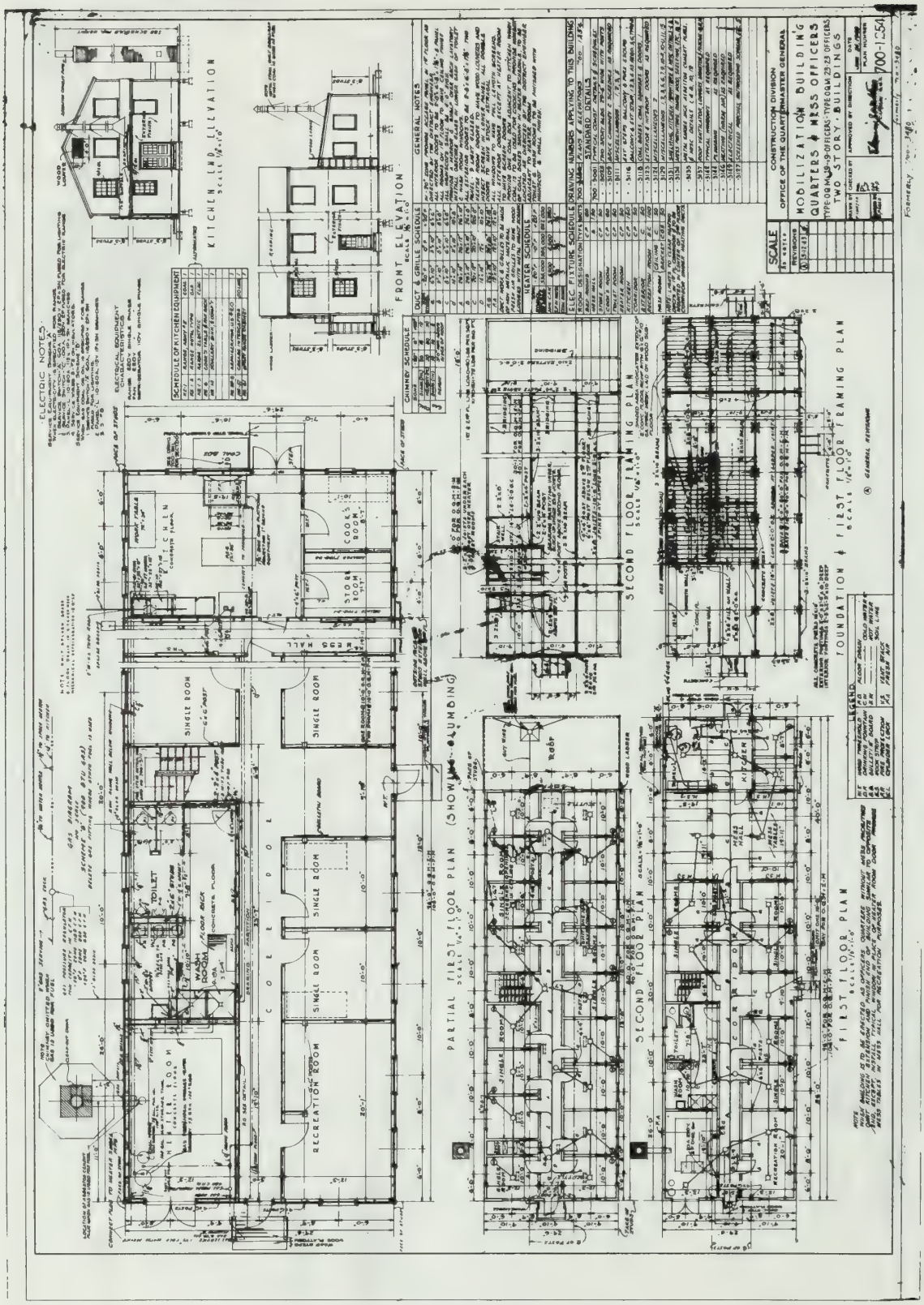
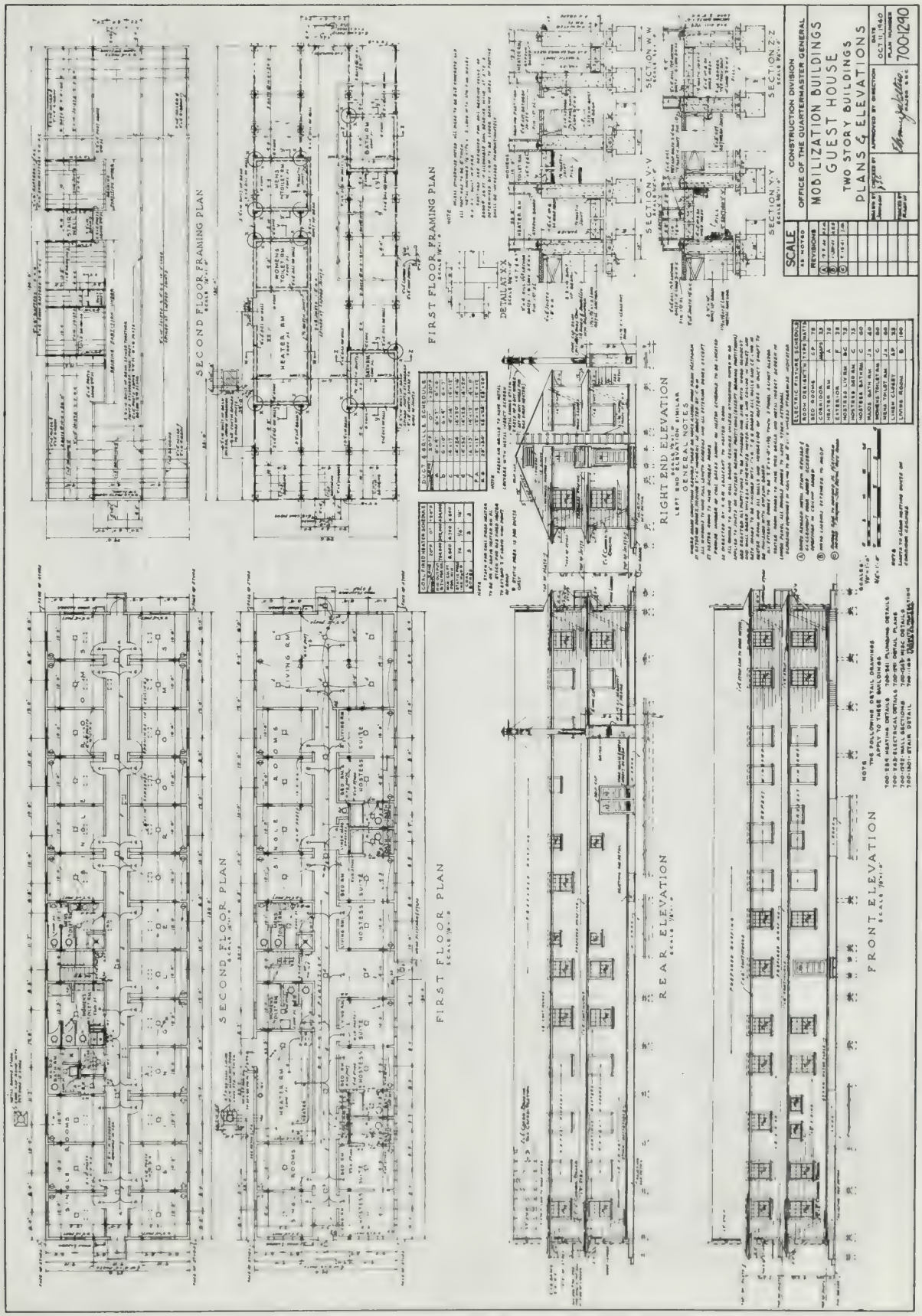
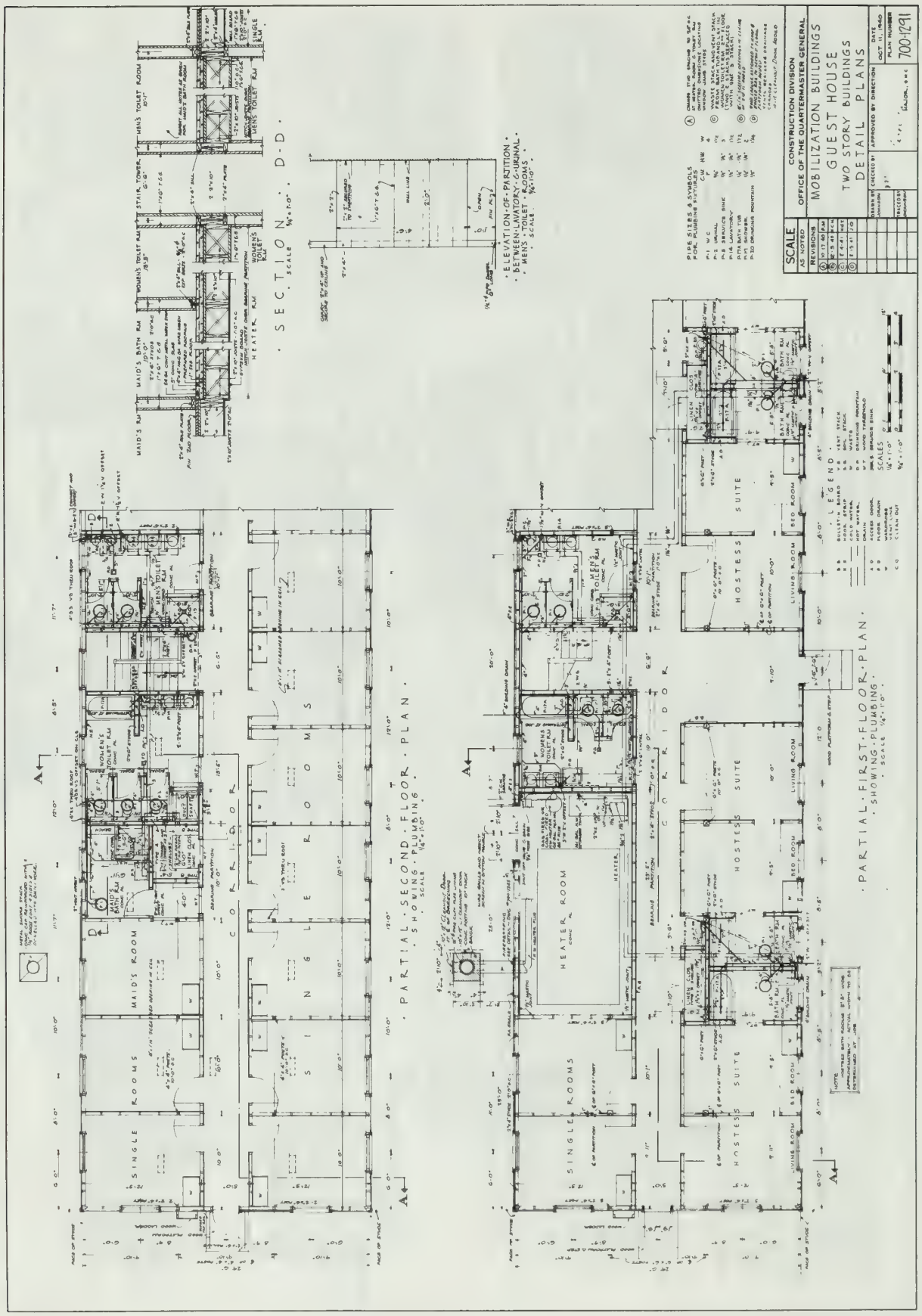


Plan Number 700-1290



Plan Number 700-1291



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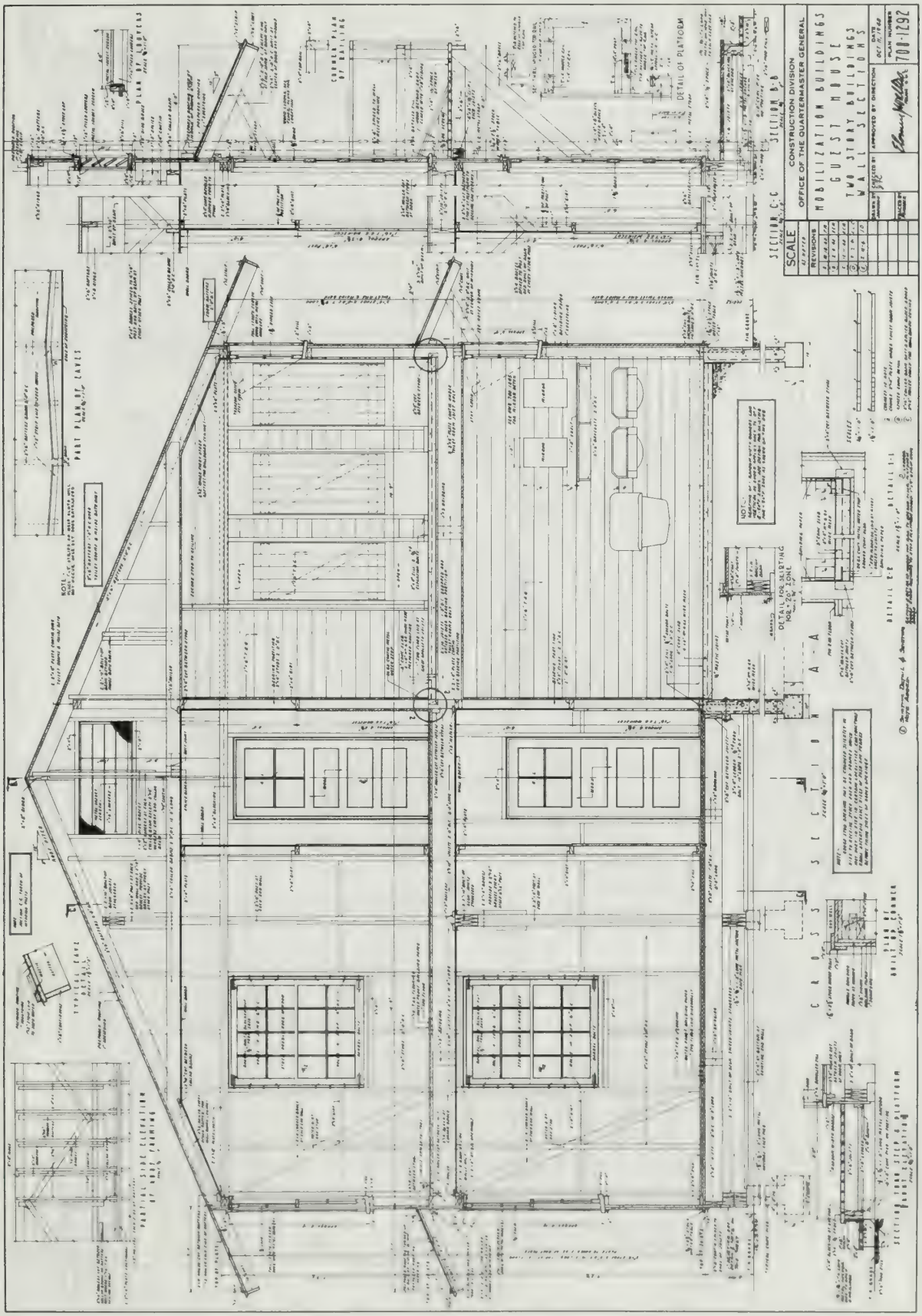
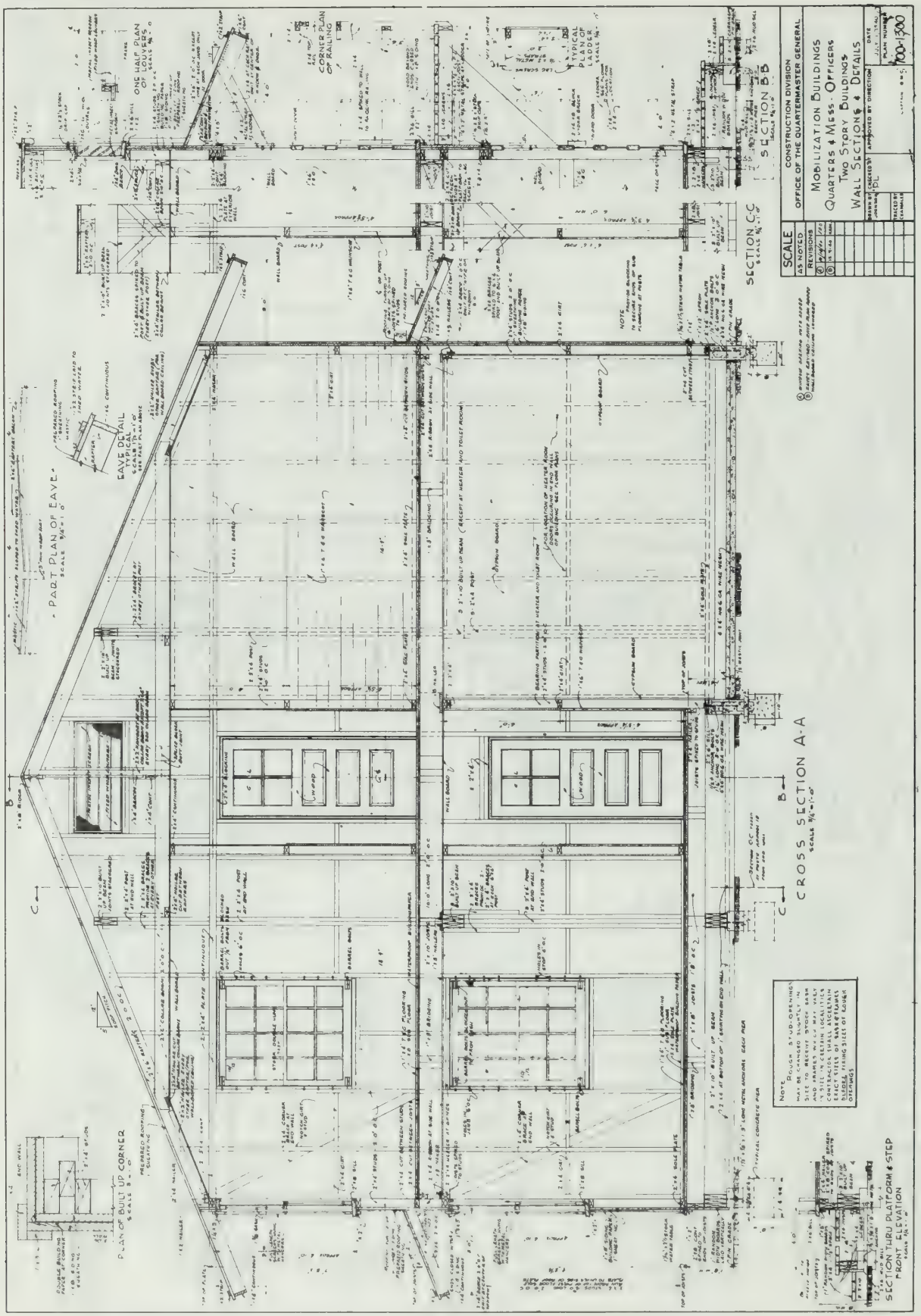
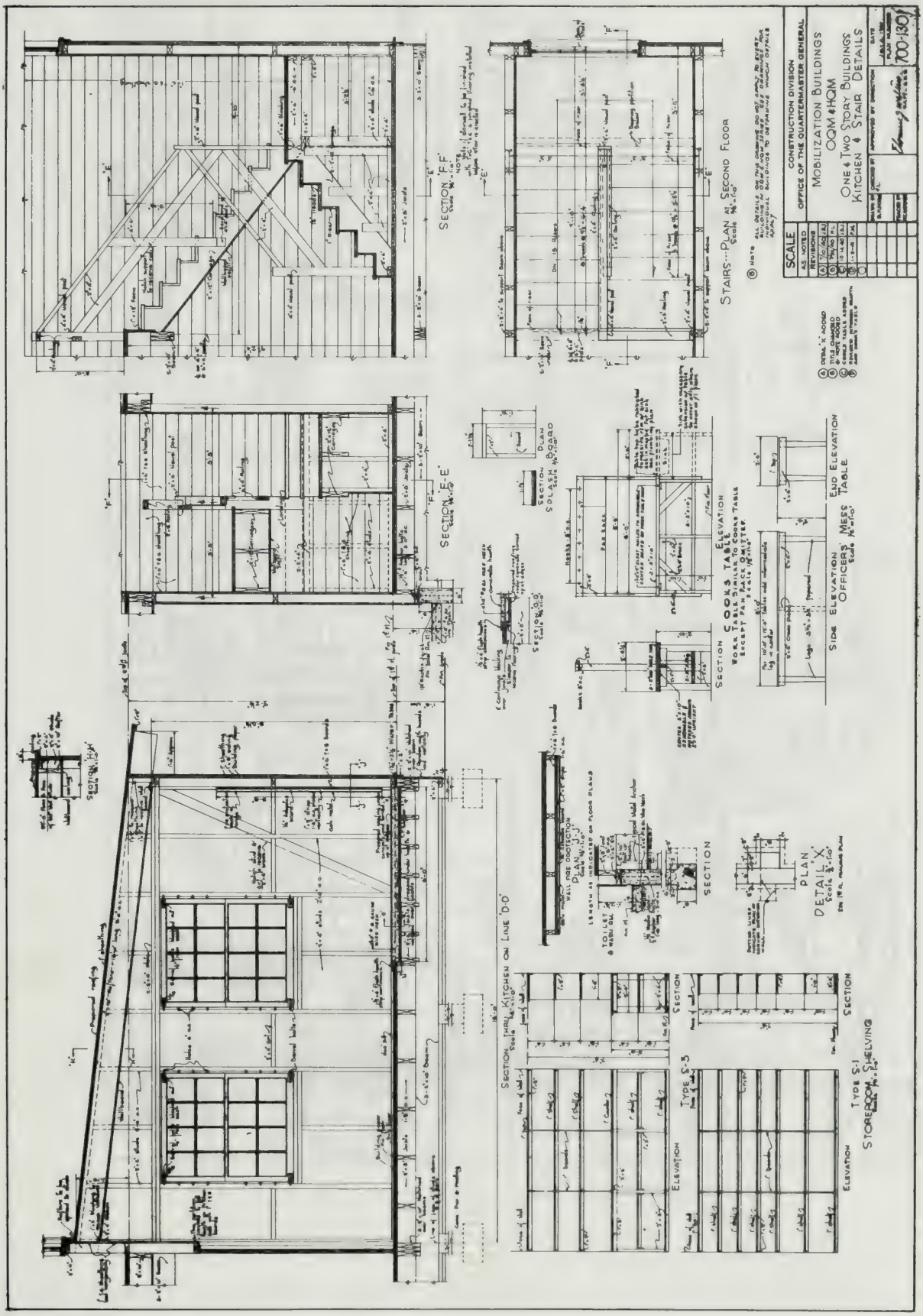


Plan Number 700-1300



Plan Number 700-1301



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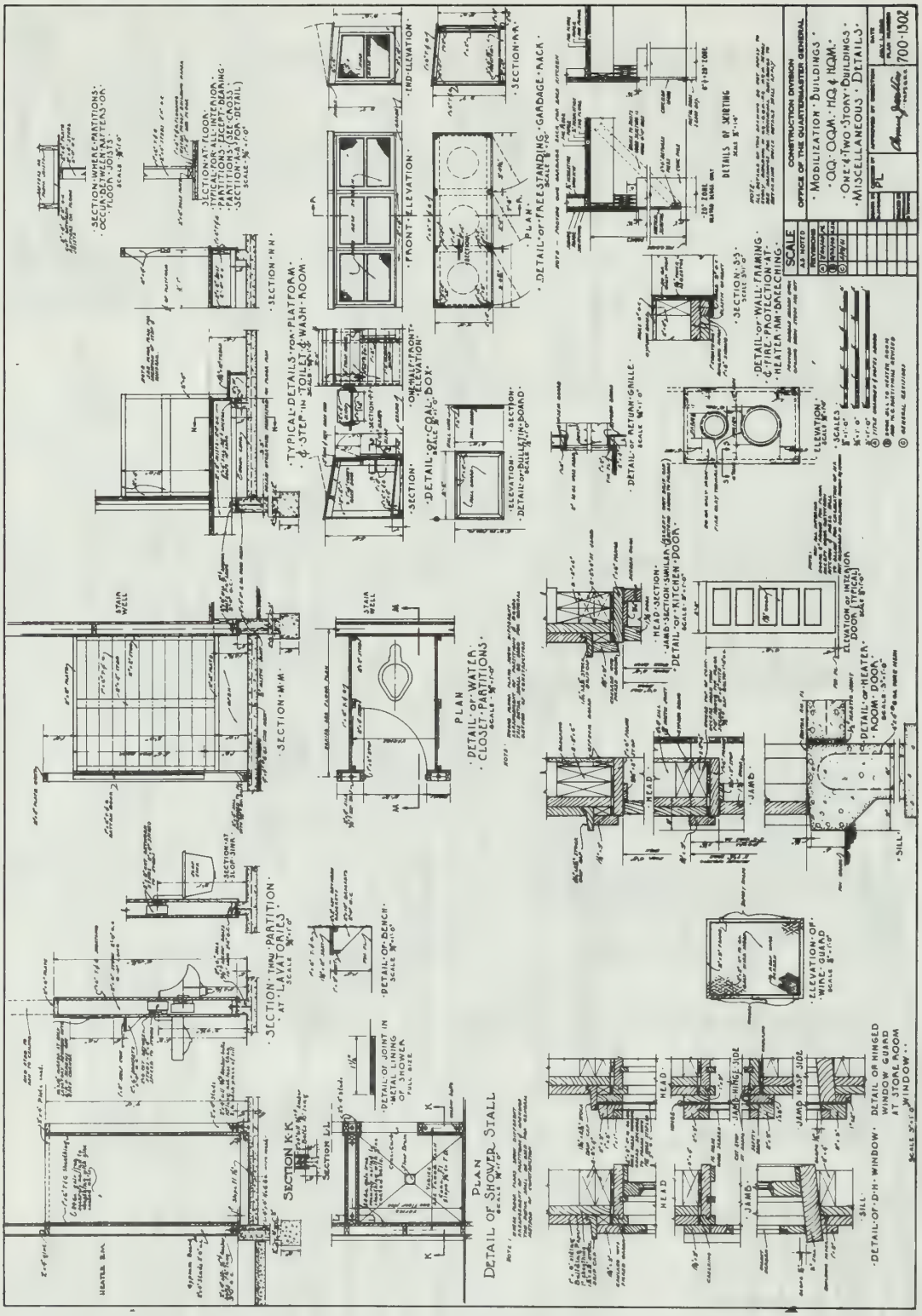

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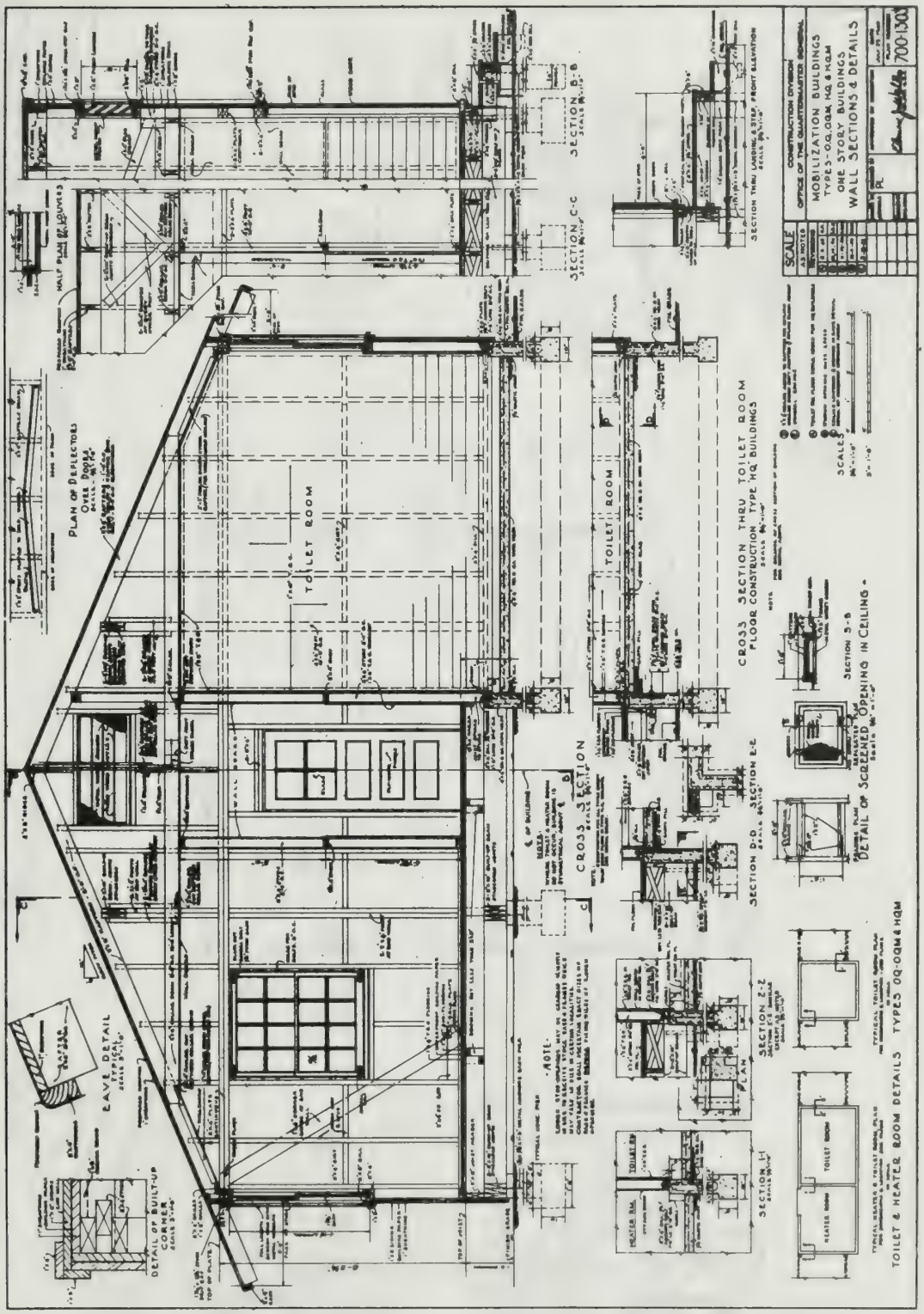

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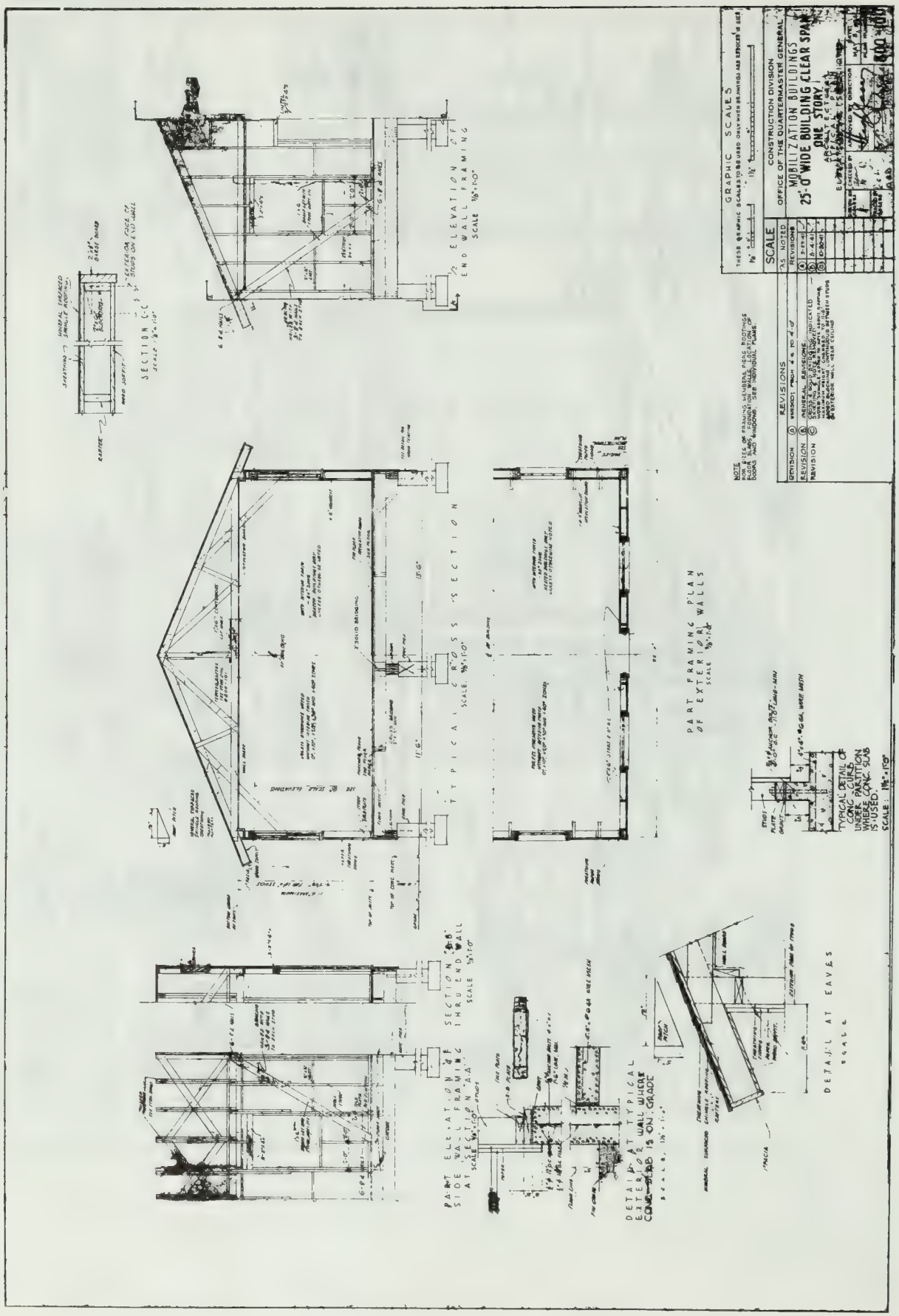

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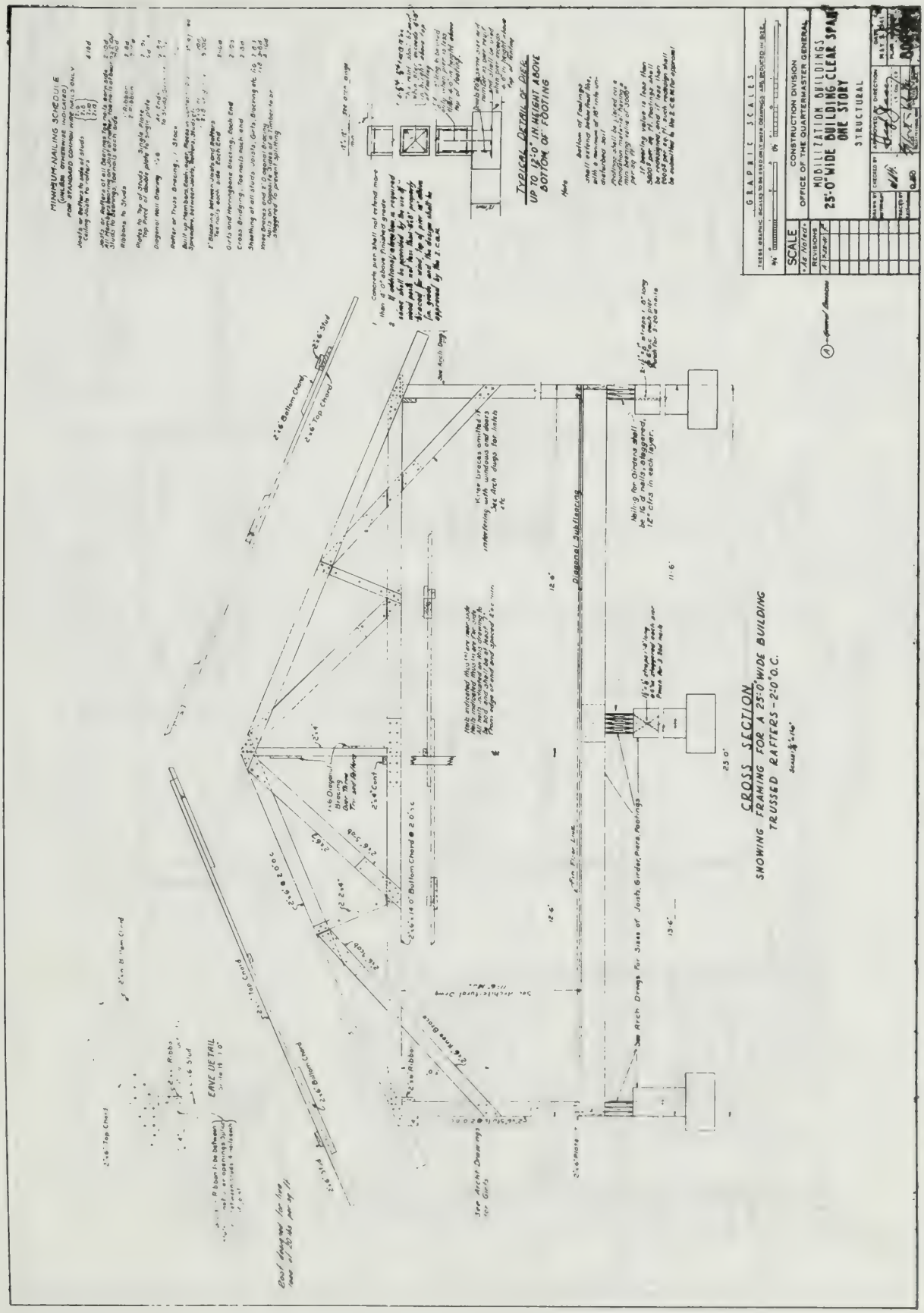

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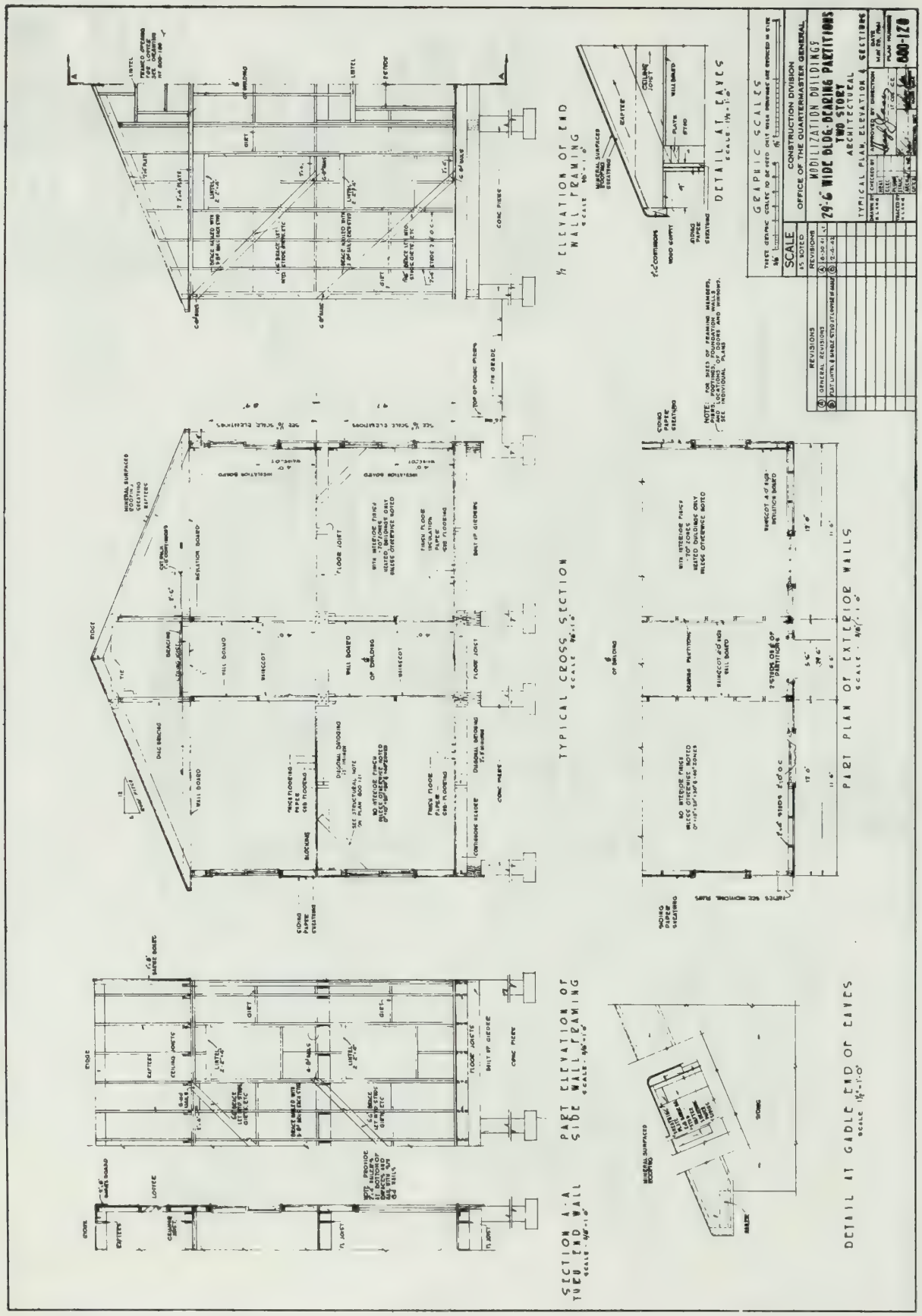
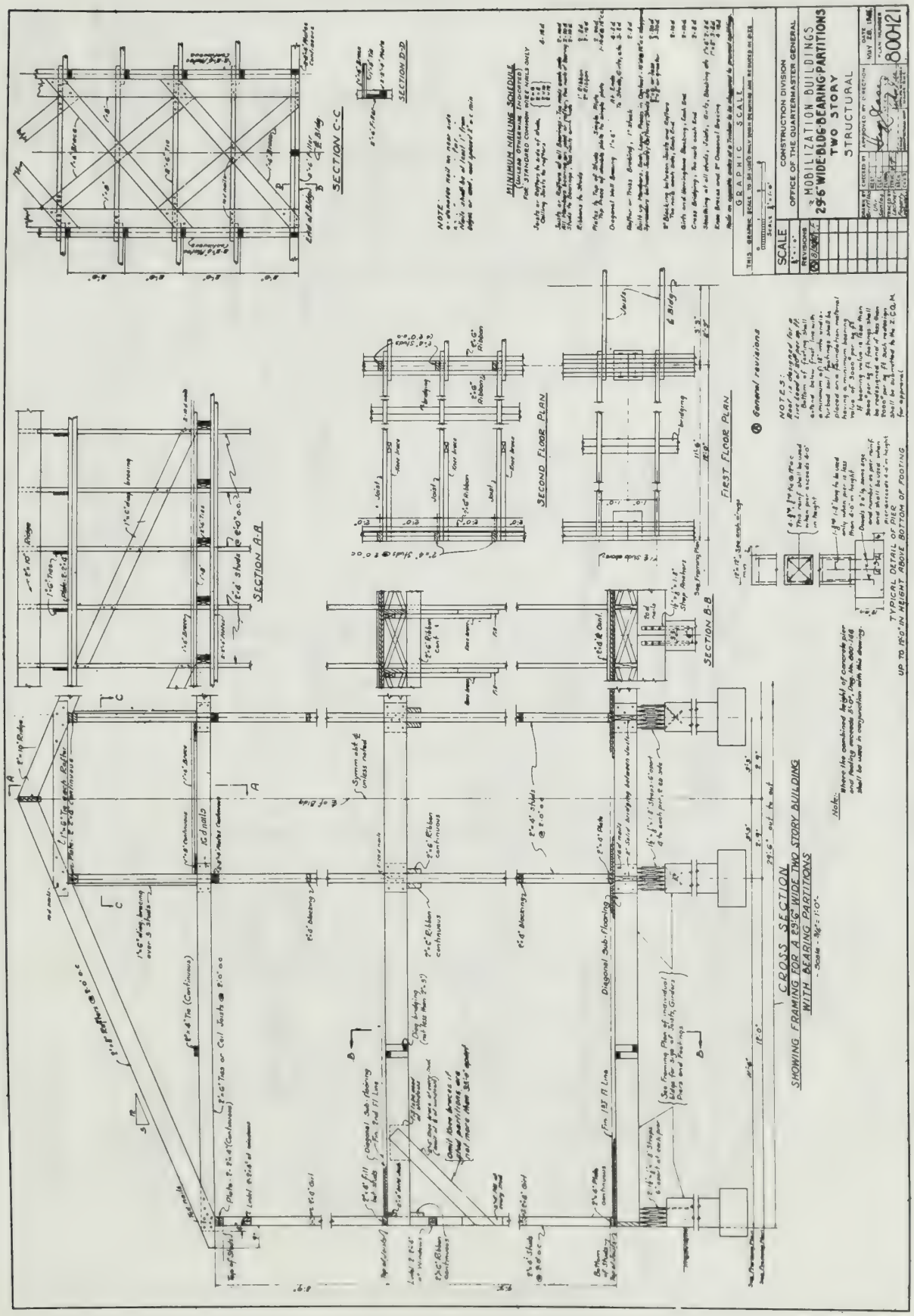
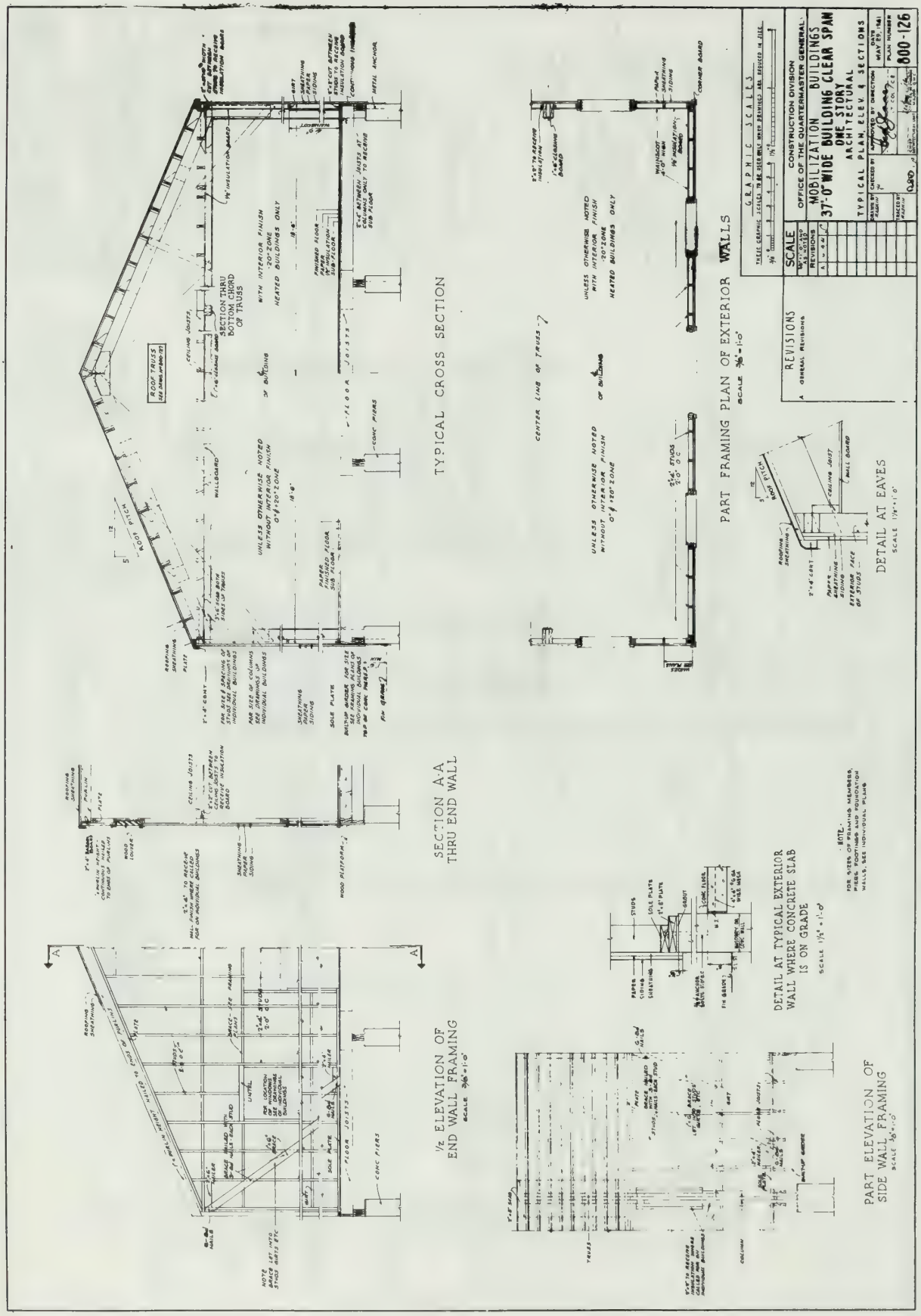


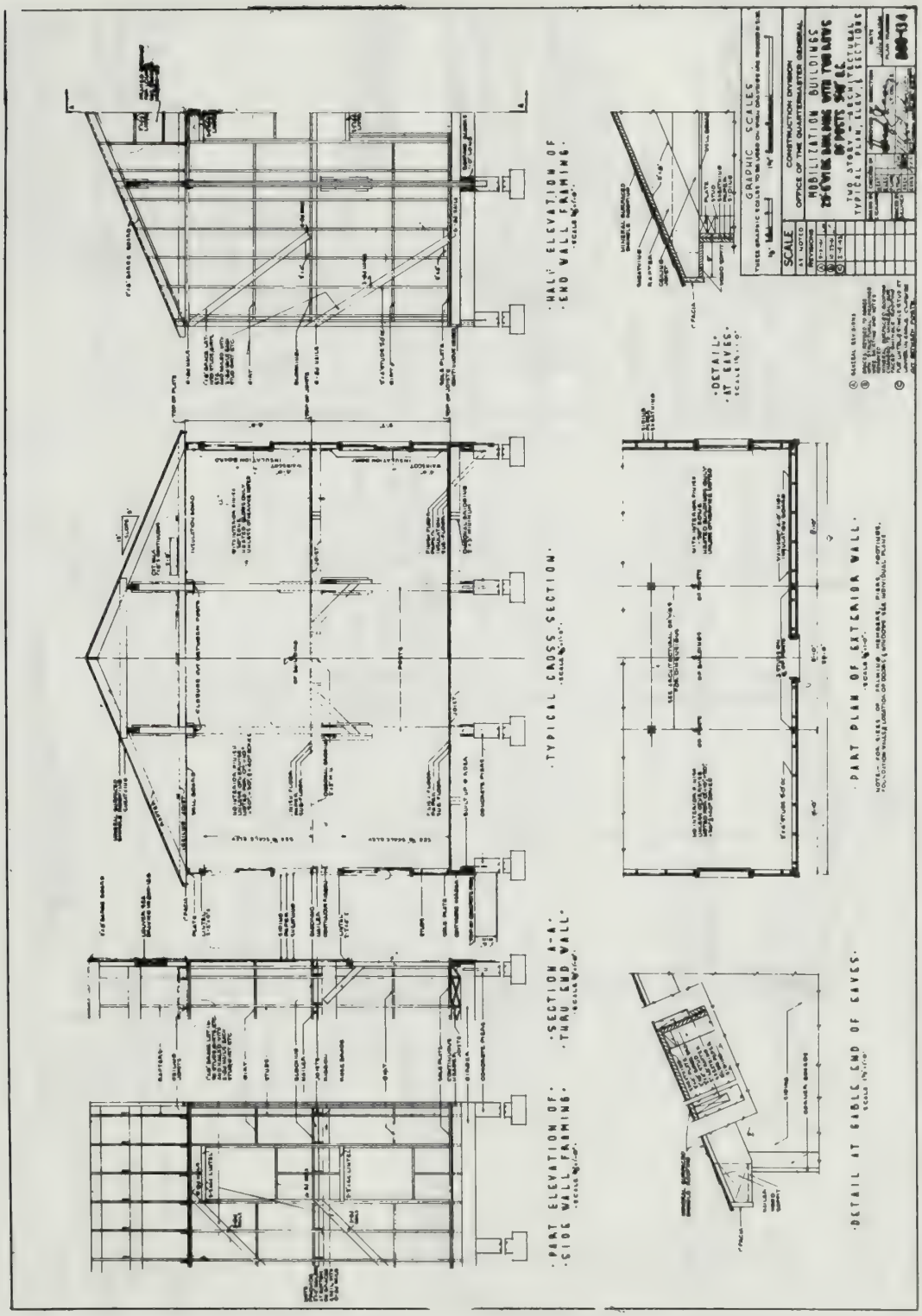
Plan Number 800-121



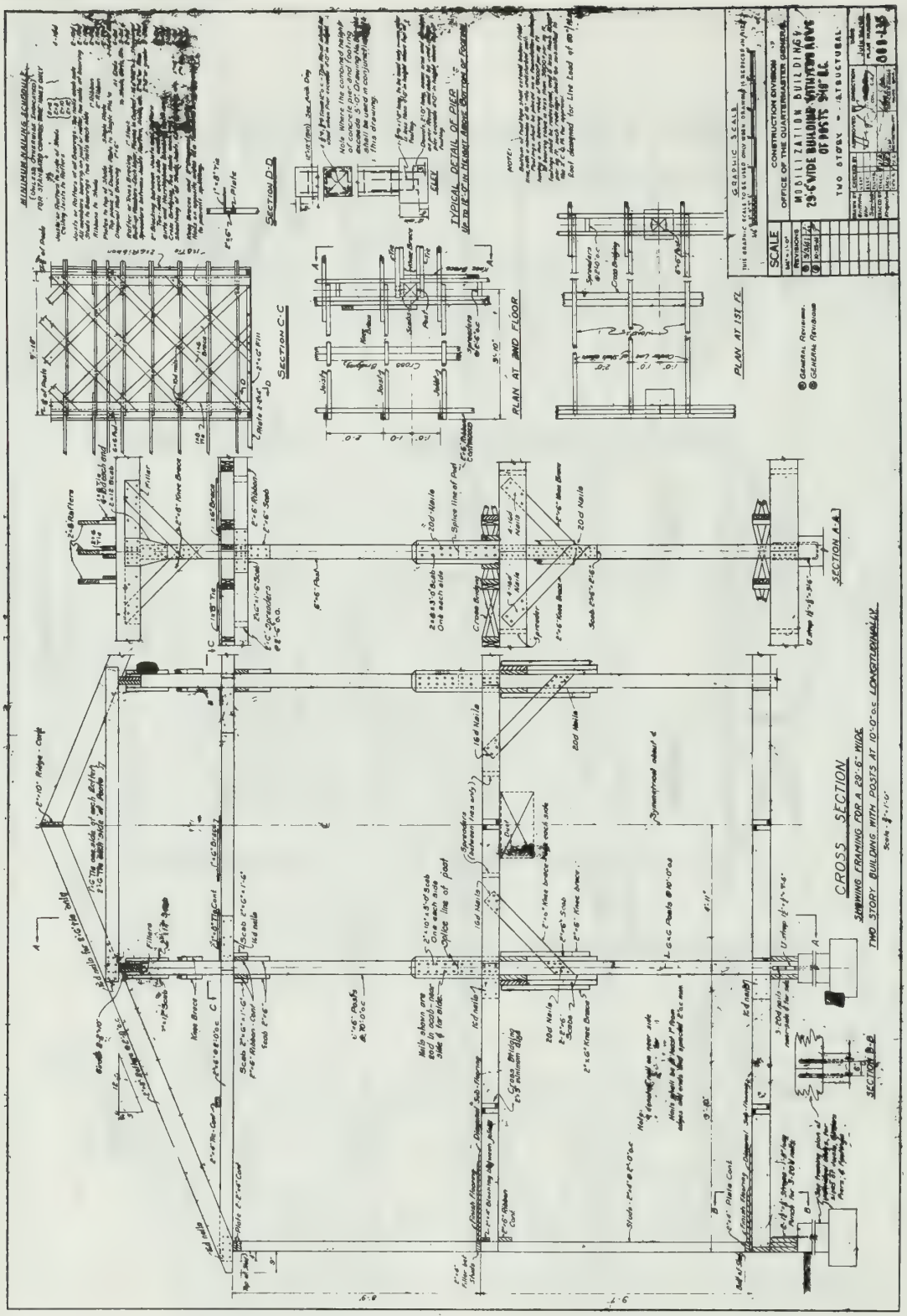
Plan Number 800-126



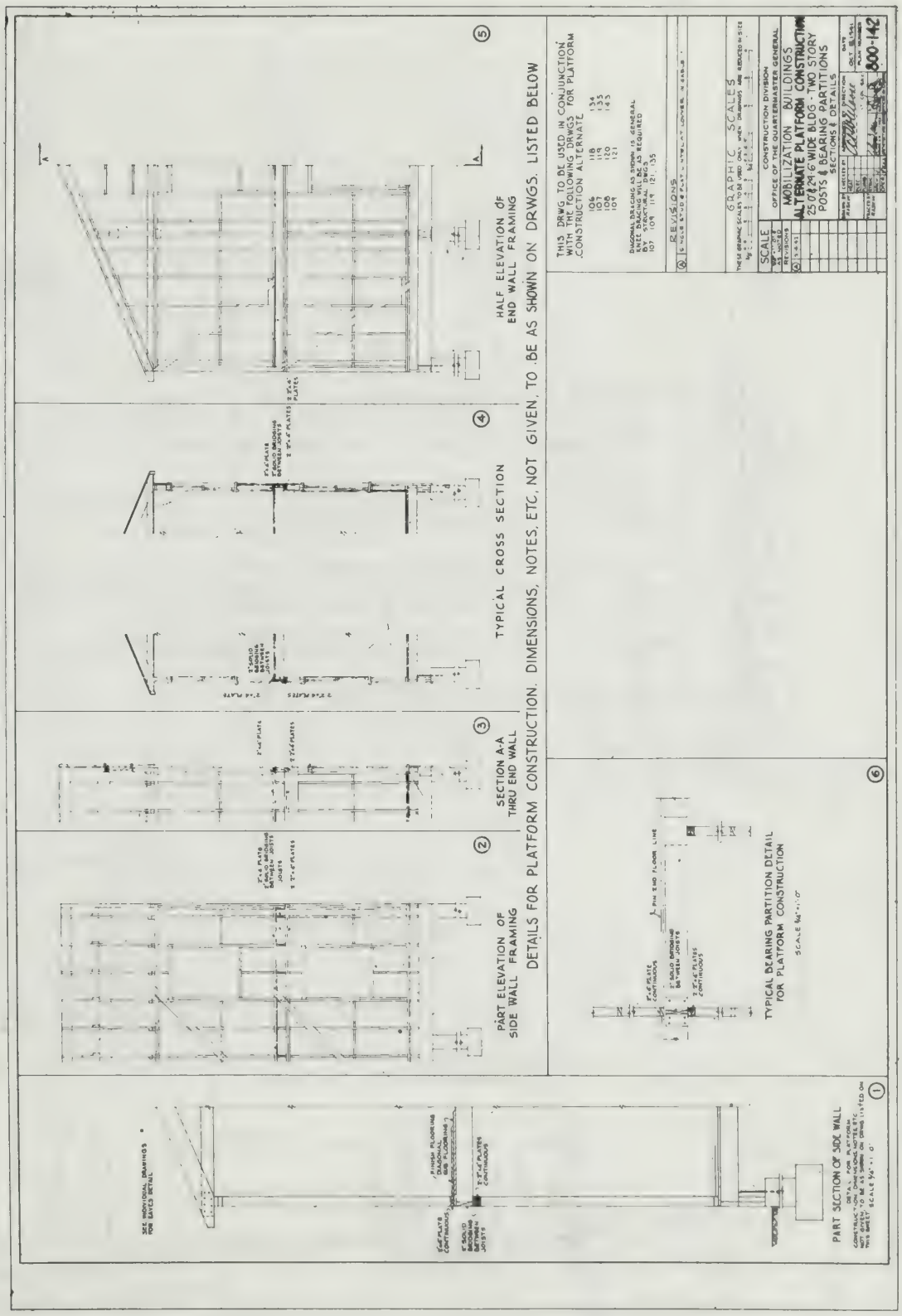
Plan Number 800-134



Plan Number 800-135



Plan Number 800-142

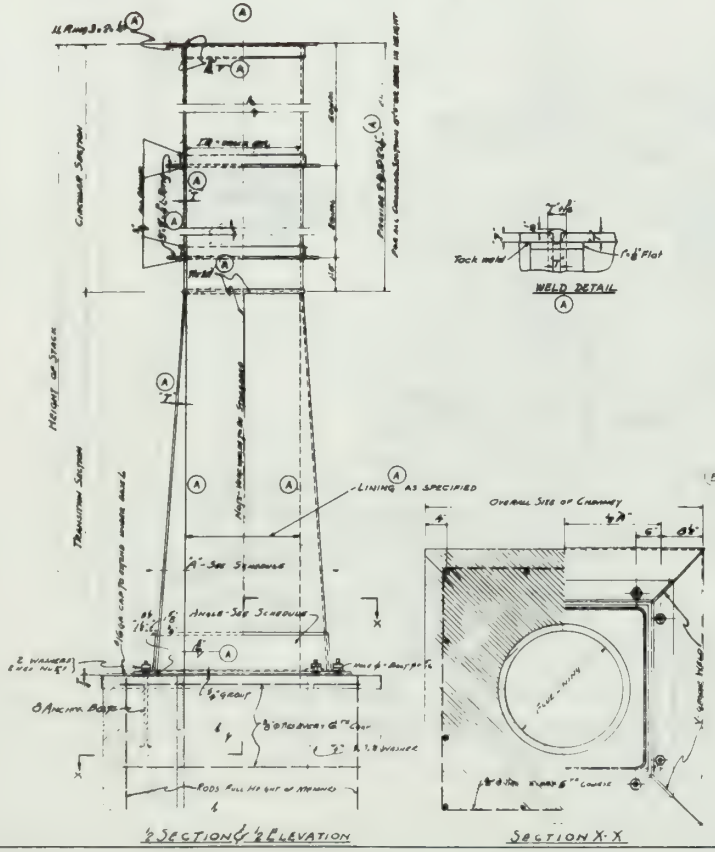


Plan Number 700-145

STACK AND BRICK CHIMNEY SCHEDULE

Stack Diameter	Height of Stack	Circular Sec. "T"	Circular Sec. Height	Transition Sec. "T"	Transition Sec. Height	Angle at Base Size	Angle at Base "A"	Anchor Bolts	Overall Size of Chimney	Fire Lining
12"	10'0	#11 ga.	7'0"	#11 ga	3'0"	4"x3"x⅜	5'1	¾"ø x	3'6"	12"ø
	12'0	do	9'0"	do	3'0"	do	do	do		
	14'0	do	10'0"	do	4'0"	do	do	do		
	16'0	do	12'0	do	4'0	do	do	do		
	18'0"	do	13'0	do	5'0"	do	do	do		
14"	10'0"	#11 ga.	7'0"	#11 ga.	3'0"	4"x3"x⅜	2'11"	¾"ø x	3'6"	15"ø
	12'0"	do	9'0	do	3'0"	do	do	do		
	14'0"	do	10'0"	do	4'0	do	do	do		
	16'0"	do	12'0"	do	4'0"	do	do	do		
	18'0	do	13'0"	do	5'0"	do	do	do		
16"	10'0"	#11 ga	7'0"	#11 ga	3'0"	4"x3"x⅜	2'6"	¾"ø x	3'11"	18"ø
	12'0"	do	9'0"	do	3'0"	do	do	do		
	14'0	do	10'0"	do	4'0"	do	do	do		
	16'0"	do	12'0"	do	4'0"	do	do	do		
	18'0"	do	13'0"	do	5'0"	do	do	do		
18"	10'0	#11 ga	7'0"	#11 ga	3'0"	4"x3"x⅜	2'6"	¾"ø x	3'11"	18"ø
	12'0"	do	9'0"	do	3'0"	do	do	do		
	14'0"	do	10'0"	do	4'0"	do	do	do		
	16'0"	do	12'0"	do	4'0"	do	do	do		
	18'0"	do	13'0"	do	5'0"	do	do	do		
	20'0"	do	15'0"	do	5'0"	do	do	do		
	22'0"	do	16'0"	do	6'0"	do	do	do		
	24'0"	do	18'0"	do	6'0"	do	do	do		
	26'0"	do	19'0"	do	7'0"	do	do	do		
	28'0"	do	21'0	do	7'0"	do	do	do		
20"	10'0	#11 ga.	7'0"	#11 ga	3'0"	4"x3"x⅜	2'10"	¾"ø x	4'3"	20"ø
	12'0"	do	9'0"	do	3'0"	do	do	do		
	14'0"	do	10'0"	do	4'0"	do	do	do		
	16'0"	do	12'0"	do	4'0"	do	do	do		
	18'0"	do	13'0"	do	5'0"	do	do	do		
	20'0"	do	15'0"	do	5'0"	do	do	do		
	22'0"	do	16'0"	do	6'0"	do	do	do		
	24'0"	do	18'0"	do	6'0"	do	do	do		
	26'0"	do	19'0"	do	7'0"	do	do	do		
	28'0"	do	21'0	do	7'0"	do	do	do		
22"	10'0"	#11 ga.	7'0	#11 ga.	3'0	4"x3"x⅜	3'10	¾"ø x	4'3"	22"ø
	12'0"	do	9'0"	do	3'0"	do	do	do		
	14'0	do	10'0"	do	4'0"	do	do	do		
	16'0"	do	12'0"	do	4'0"	do	do	do		
	18'0"	do	13'0"	do	5'0"	do	do	do		
	20'0"	do	15'0"	do	5'0"	do	do	do		
	22'0	do	16'0"	do	6'0"	do	do	do		
	24'0"	do	18'0"	do	6'0"	do	do	do		
	26'0"	do	19'0"	do	7'0"	do	do	do		
	28'0"	do	21'0	do	7'0"	do	do	do		
24"	10'0"	#10 ga.	7'0"	#10 ga	3'0	4"x3"x⅜	3'5"	¾"ø x	4'7"	24"ø
	12'0"	do	9'0"	do	3'0	do	do	do		
	14'0"	do	10'0	do	4'0"	do	do	do		
	16'0"	do	12'0"	do	4'0	do	do	do		
	18'0"	do	13'0"	do	5'0	do	do	do		
	20'0"	do	15'0"	do	5'0	do	do	do		
	22'0"	do	16'0"	do	6'0"	do	do	do		
	24'0	do	18'0"	do	6'0"	do	do	do		
	26'0"	do	19'0"	do	7'0"	do	do	do		
	28'0	do	21'0	do	7'0	do	do	do		
27"	10'0"	⅜	7'0	½	3'0	4"x3"x⅝	3'1	¾"ø x	4'8"	27"ø
	12'0	do	9'0"	do	3'0"	do	do	do		
	14'0	do	10'0	do	4'0	do	do	do		
	16'0	do	12'0	do	4'0	do	do	do		
	18'0	do	13'0	do	5'0	do	do	do		
	20'0	do	15'0	do	5'0	do	do	do		
	22'0	do	16'0	do	6'0	do	do	do		
	24'0	do	18'0	do	6'0	do	do	do		
	26'0	do	19'0	do	7'0	do	do	do		
	28'0	do	21'0	do	7'0	do	do	do		

(A) General Revision
(B) Schedule for 27" Diam. stack added. Changed lengths of anchor bolts on 22" and 24" diam stacks

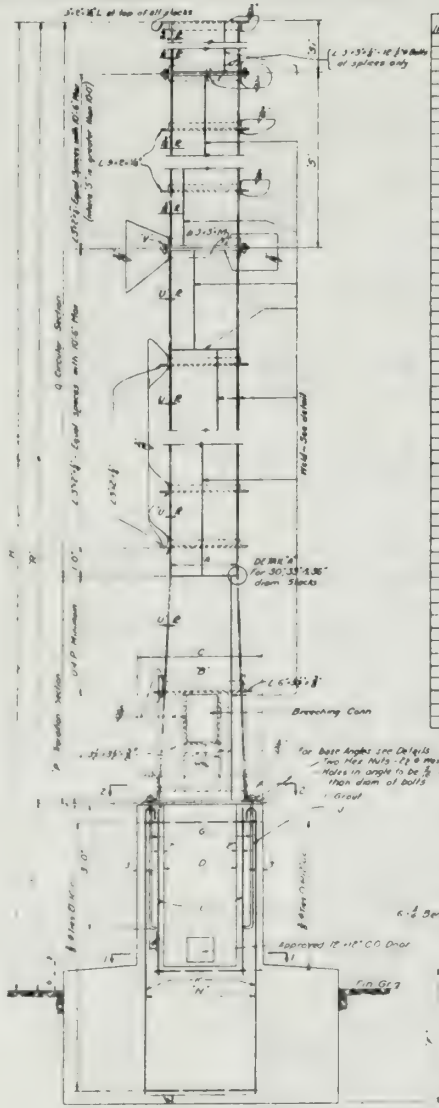


½ Section & ½ Elevation

(A) NOTES:
All welds shall be continuous except where noted otherwise
For sizes and details of brickwork and footings see Architectural drawings

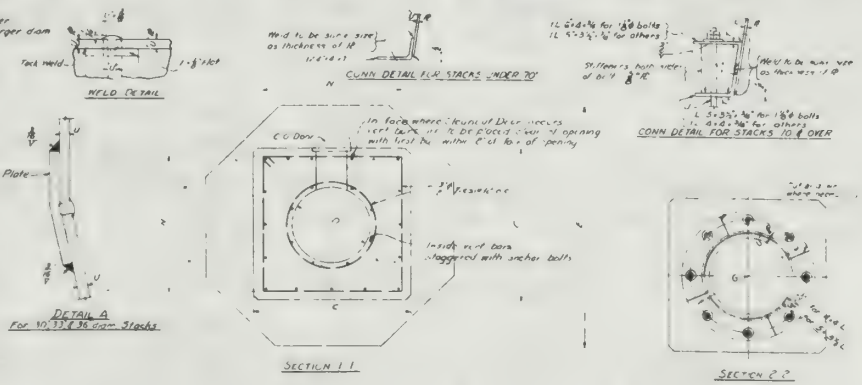
SCALE	CONSTRUCTION DIVISION OFFICE OF THE QUARTERMASTER GENERAL
No Scale	MOBILIZATION BUILDINGS
REVISIONS	COMBINATION METAL & BRICK CHIMNEY DETAILS & SCHEDULE
(A) 6-9-41	
(B) 6-11-41	
DRAWN BY Boos	CHECKED BY [illegible]
TRACED BY Boos	APPROVED: DIRECTION [signature]
	DATE MAY 9, 1941
	PLAN NUMBER 800-145

THIS DRAWING SUPERSEDES DRAWING # 700-221



STACK I.N.S. DIA. 'A'	HEIGHT 'H'	BASE O.U.S. DIA. 'B'	'C'	'D'	'E'	'F'	BOLT CIRCLE 'G'	ROD SO 'H'	'J'	'K'	'L'	'M'	'O'	'P'	'Q'	'R'	'S'	'T'	'U'	'V'
10'	30'	15'	2'-8" Sq	18" ø	5'-9"	4'-0"	1'-8"	2'-2"	8 - ¾ ø Bolts	12'-¾ ø	4'-¾ ø	—	5'-0"	6'-0"	18'-0"	25'-0"	OUT	1	1	—
10'	33'	15'	2'-8"	18"	6'-6"	4'-0"	1'-8"	2'-2"	8-¾ ø	12'-¾ ø	4'-¾ ø	—	5'-0"	6'-0"	24'-0"	30'-0"	OUT	1	1	—
12'	30'	18'	2'-11"	15"	6'-3"	4'-0"	1'-11"	2'-5"	8-¾ ø	12'-¾ ø	8'-¾ ø	—	5'-0"	6'-0"	19'-0"	23'-0"	OUT	1	1	—
12'	33'	18'	2'-11"	15"	6'-6"	4'-0"	1'-11"	2'-5"	8-¾ ø	12'-¾ ø	8'-¾ ø	—	5'-0"	6'-0"	24'-0"	30'-0"	OUT	1	1	—
12'	40'	18'	3'-4"	18"	7'-6"	4'-0"	2'-1"	2'-10"	8-¾ ø	16'-¾ ø	8'-¾ ø	—	5'-0"	8'-0"	27'-0"	33'-0"	OUT	1	1	—
15'	30'	22"	3'-2"	18"	7'-3"	4'-0"	2'-1"	2'-8"	8-¾ ø	16'-¾ ø	9'-¾ ø	—	5'-0"	6'-0"	18'-0"	25'-0"	OUT	1	1	—
15'	33'	22"	3'-2"	18"	7'-3"	4'-0"	2'-1"	2'-8"	8-¾ ø	16'-¾ ø	9'-¾ ø	—	5'-0"	6'-0"	24'-0"	30'-0"	OUT	1	1	—
15'	40'	24"	3'-9"	21"	7'-9"	4'-0"	2'-5"	3'-3"	8-¾ ø	16'-¾ ø	9'-¾ ø	—	5'-0"	8'-0"	27'-0"	33'-0"	OUT	1	1	—
18'	30'	27"	4'-0"	24"	7'-9"	4'-0"	2'-8"	3'-6"	8-¾ ø	16'-¾ ø	9'-¾ ø	—	5'-0"	6'-0"	18'-0"	25'-0"	OUT	1	1	—
18'	33'	27"	4'-0"	24"	7'-9"	4'-0"	2'-8"	3'-6"	8-¾ ø	16'-¾ ø	9'-¾ ø	—	5'-0"	6'-0"	24'-0"	30'-0"	OUT	1	1	—
18'	40'	30"	4'-3"	27"	8'-3"	4'-0"	2'-11"	3'-9"	12-¾ ø	16'-¾ ø	9'-¾ ø	—	5'-0"	8'-0"	27'-0"	33'-0"	OUT	1	1	—
18'	45'	30"	4'-3"	27"	8'-9"	4'-0"	2'-11"	3'-9"	12-¾ ø	20'-¾ ø	10'-¾ ø	—	5'-0"	8'-0"	32'-0"	40'-0"	OUT	1	1	—
18'	50'	30"	4'-7"	27"	9'-6"	4'-0"	2'-11"	4'-1"	12-¾ ø	20'-¾ ø	10'-¾ ø	¾	5'-0"	9'-0"	36'-0"	45'-0"	5'-0"	1	¾	8-¾ ø Bolts
18'	55'	30"	4'-9"	27"	9'-9"	4'-0"	2'-11"	4'-1"	12-¾ ø	20'-¾ ø	10'-¾ ø	¾	5'-0"	9'-0"	41'-0"	50'-0"	10'-0"	1	¾	8-¾ ø
18'	60'	30"	4'-9"	27"	9'-9"	4'-0"	2'-11"	4'-1"	12-¾ ø	20'-¾ ø	10'-¾ ø	¾	5'-0"	9'-0"	46'-0"	55'-0"	15'-0"	1	¾	8-¾ ø
20'	40'	33"	4'-6"	30"	9'-0"	4'-0"	3'-2"	4'-0"	12-¾ ø	20'-¾ ø	10'-¾ ø	—	5'-0"	8'-0"	27'-0"	33'-0"	OUT	1	¾	—
20'	45'	33"	4'-6"	30"	9'-0"	4'-0"	3'-2"	4'-0"	12-¾ ø	20'-¾ ø	10'-¾ ø	—	5'-0"	8'-0"	32'-0"	40'-0"	OUT	1	¾	—
20'	50'	33"	4'-10"	30"	9'-9"	4'-0"	3'-2"	4'-4"	12-¾ ø	24-¾ ø	10'-¾ ø	¾	5'-0"	9'-0"	36'-0"	45'-0"	5'-0"	1	¾	8-¾ ø
20'	55'	33"	5'-2"	30"	10'-0"	5'-0"	3'-2"	4'-8"	12-¾ ø	24-¾ ø	10'-¾ ø	¾	5'-0"	9'-0"	41'-0"	50'-0"	10'-0"	1	¾	8-¾ ø
20'	60'	33"	5'-6"	30"	10'-0"	5'-0"	3'-2"	4'-8"	12-¾ ø	24-¾ ø	10'-¾ ø	¾	5'-0"	9'-0"	46'-0"	55'-0"	15'-0"	1	¾	8-¾ ø
22'	45'	35"	5'-0"	32"	10'-0"	4'-0"	3'-4"	4'-6"	12-¾ ø	24-¾ ø	12'-¾ ø	—	5'-0"	9'-0"	32'-0"	40'-0"	OUT	1	¾	—
22'	50'	35"	5'-0"	32"	10'-0"	4'-0"	3'-4"	4'-6"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	36'-0"	45'-0"	5'-0"	1	¾	8-¾ ø
22'	55'	35"	5'-0"	32"	9'-9"	5'-0"	3'-4"	4'-10"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	41'-0"	50'-0"	10'-0"	1	¾	8-¾ ø
22'	60'	35"	5'-0"	32"	10'-3"	5'-0"	3'-4"	4'-10"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	46'-0"	55'-0"	15'-0"	1	¾	8-¾ ø
24'	45'	38"	5'-0"	34"	9'-3"	5'-0"	3'-7"	4'-6"	12-¾ ø	24-¾ ø	12'-¾ ø	—	5'-0"	9'-0"	32'-0"	40'-0"	OUT	1	¾	—
24'	50'	38"	5'-0"	34"	9'-9"	5'-0"	3'-7"	4'-6"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	36'-0"	45'-0"	5'-0"	1	¾	12-¾ ø
24'	55'	38"	5'-0"	34"	10'-3"	5'-0"	3'-7"	4'-6"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	41'-0"	50'-0"	10'-0"	1	¾	12-¾ ø
24'	60'	38"	5'-0"	34"	10'-9"	5'-0"	3'-7"	4'-6"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	46'-0"	55'-0"	15'-0"	1	¾	12-¾ ø
24'	65'	38"	5'-0"	34"	11'-0"	5'-0"	3'-7"	4'-6"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	10'-0"	50'-0"	60'-0"	20'-0"	1	¾	12-¾ ø
24'	70'	38"	5'-0"	34"	11'-3"	5'-0"	3'-7"	4'-6"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	10'-0"	50'-0"	60'-0"	20'-0"	1	¾	12-¾ ø
27'	50'	42"	5'-6"	38"	10'-3"	5'-0"	3'-11"	5'-0"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	36'-0"	45'-0"	5'-0"	1	¾	12-¾ ø
27'	55'	42"	5'-6"	38"	10'-9"	5'-0"	3'-11"	5'-0"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	41'-0"	50'-0"	10'-0"	1	¾	12-¾ ø
27'	60'	42"	5'-6"	38"	11'-0"	5'-0"	3'-11"	5'-0"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	9'-0"	46'-0"	55'-0"	15'-0"	1	¾	12-¾ ø
27'	65'	42"	5'-6"	38"	11'-4"	5'-0"	3'-11"	5'-0"	12-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	10'-0"	50'-0"	60'-0"	20'-0"	1	¾	12-¾ ø
27'	70'	42"	5'-6"	38"	11'-8"	5'-0"	3'-11"	5'-0"	16-¾ ø	24-¾ ø	12'-¾ ø	¾	5'-0"	10'-0"	55'-0"	65'-0"	25'-0"	1	¾	12-¾ ø
30'	55'	46"	5'-10"	42"	11'-8"	5'-0"	4'-3"	5'-4"	16-¾ ø	28-¾ ø	16'-¾ ø	¾	5'-0"	9'-0"	41'-0"	50'-0"	10'-0"	1	¾	12-¾ ø
30'	60'	46"	5'-10"	42"	11'-8"	5'-0"	4'-3"	5'-4"	16-¾ ø	28-¾ ø	16'-¾ ø	¾	5'-0"	9'-0"	46'-0"	55'-0"	15'-0"	1	¾	12-¾ ø
30'	65'	46"	5'-10"	42"	12'-0"	5'-0"	4'-3"	5'-4"	16-¾ ø	28-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	50'-0"	60'-0"	20'-0"	1	¾	12-¾ ø
30'	70'	46"	5'-10"	42"	12'-4"	5'-0"	4'-3"	5'-4"	16-¾ ø	28-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	53'-0"	65'-0"	25'-0"	1	¾	12-¾ ø
30'	75'	46"	5'-10"	42"	12'-8"	5'-0"	4'-3"	5'-4"	16-¾ ø	28-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	58'-0"	70'-0"	30'-0"	1	¾	12-¾ ø
30'	80'	46"	5'-10"	42"	13'-0"	5'-0"	4'-3"	5'-4"	16-1 ø	28-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	63'-0"	75'-0"	35'-0"	1	¾	12-¾ ø
33'	60'	50"	6'-2"	46"	11'-9"	5'-0"	4'-7"	5'-8"	16-¾ ø	28-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	53'-0"	65'-0"	25'-0"	1	¾	12-¾ ø
33'	65'	50"	6'-2"	46"	12'-4"	5'-0"	4'-7"	5'-8"	16-¾ ø	28-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	58'-0"	70'-0"	30'-0"	1	¾	12-¾ ø
33'	70'	50"	6'-2"	46"	12'-10"	5'-0"	4'-7"	5'-8"	16-¾ ø	28-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	63'-0"	75'-0"	35'-0"	1	¾	12-¾ ø
33'	75'	50"	6'-2"	46"	13'-6"	5'-0"	4'-7"	5'-8"	16-1"ø	28-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	58'-0"	70'-0"	30'-0"	1	¾	12-¾ ø
33'	80'	50"	6'-2"	46"	13'-9"	5'-0"	4'-7"	5'-8"	16-1"ø	28-¾ ø	16'-¾ ø	¾	5'-0"	15'-0"	62'-0"	75'-0"	35'-0"	1	¾	12-¾ ø
33'	83'	50"	6'-2"	46"	14'-0"	5'-0"	4'-7"	5'-8"	16-1"ø	28-¾ ø	16'-¾ ø	¾	5'-0"	15'-0"	67'-0"	80'-0"	40'-0"	1	¾	12-¾ ø
36'	63	54"	6'-6"	50"	13'-0"	5'-0"	4'-11"	6'-0"	16-¾ ø	32-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	50'-0"	60'-0"	20'-0"	1	¾	12-¾ ø
36'	70	54"	6'-6"	50"	13'-6"	5'-0"	4'-11"	6'-0"	16-¾ ø	32-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	53'-0"	65'-0"	25'-0"	1	¾	12-¾ ø
36'	75	54"	6'-6"	50"	14'-0"	5'-0"	4'-11"	6'-0"	16-1"ø	32-¾ ø	16'-¾ ø	¾	5'-0"	10'-0"	58'-0"	70'-0"	30'-0"	1	¾	12-¾ ø
36'	80	54"	6'-6"	50"	14'-6"	5'-0"	4'-11"	6'-0"	16-1"ø	32-¾ ø	16'-¾ ø	¾	5'-0"	15'-0"	62'-0"	75'-0"	35'-0"	1	¾	12-¾ ø
36'	83	54"	6'-6"	50"	14'-9"	5'-0"	4'-11"	6'-0"	16-1"ø	32-¾ ø	16'-¾ ø	¾	5'-0"	15'-0"	67'-0"	80'-0"	40'-0"	1	¾	12-¾ ø
36'	90	54"	6'-6"	50"	15'-3"	5'-0"	4'-11"	6'-0"	16-1"ø	32-¾ ø	16'-¾ ø	¾	5'-0"	15'-0"	75'-0"	90'-0"	45'-0"	1	¾	12-¾ ø

* Note Additional section S, Length 5'-0" for H 90'-0
Length 10'-0" for H 95'-0



NOTE

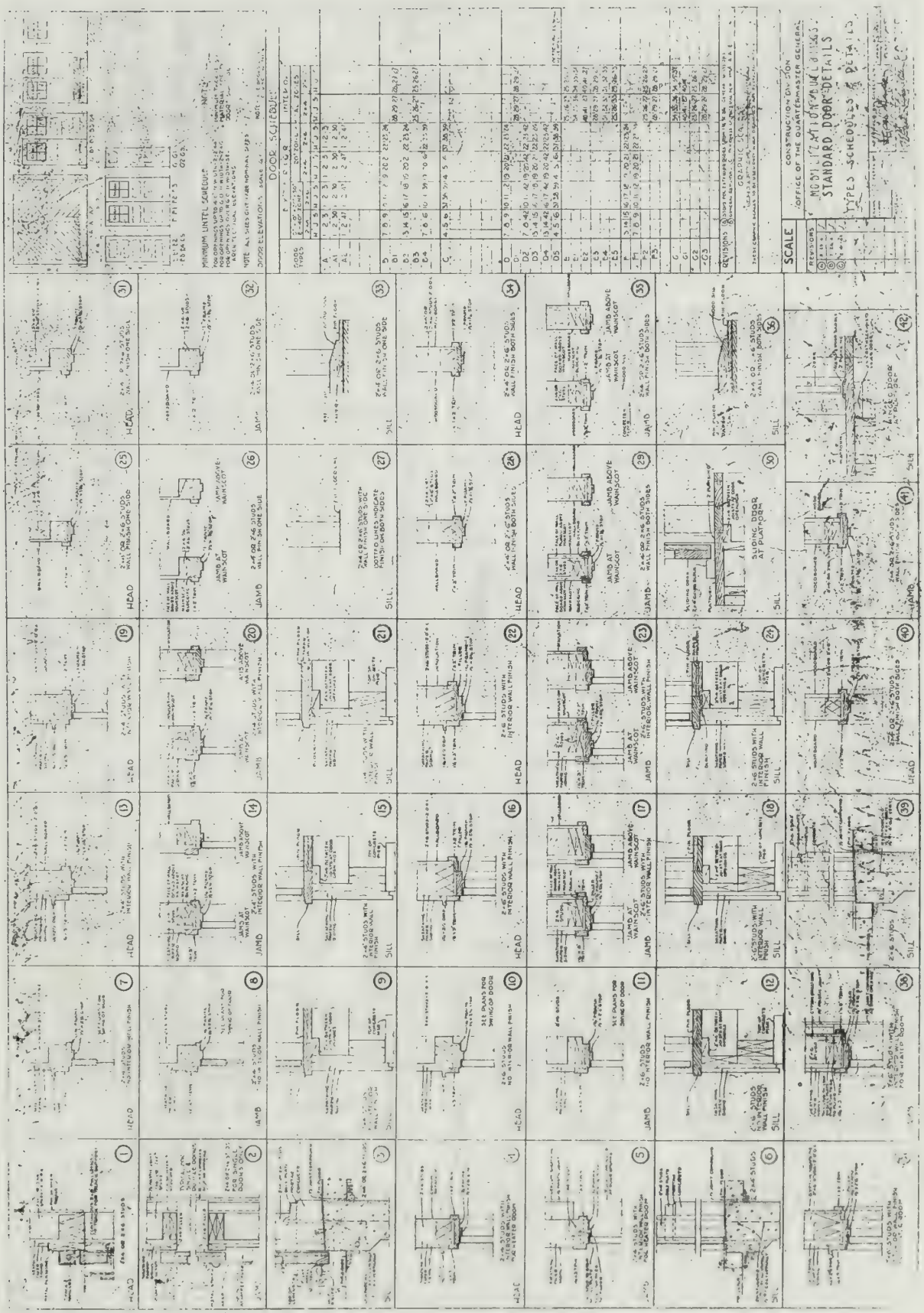
All welds shall be continuous unless otherwise noted. Coatings shall be applied in accordance with manufacturer's recommendations. A minimum bearing value of 3000 pounds per sq. ft. and a maximum pressure of 5 pounds per sq. in. resting on the base

SCALE	CONSTRUCTION DIVISION
NO SCALE	OFFICE OF THE QUARTERMASTER GENERAL
REVISIONS	MOBILIZATION BUILDINGS
	SELF SUPPORTING EXTERIOR STEEL STACK
	DETAILS & SCHEDULE
DRAWN BY: M. EMILY ROSE EDSON	CHECKED BY: HEAT, ELEC, PLUMB, PROJ. ENGR.
TRACED BY: S. PECKONS	APPROVED BY DIRECTION
	DATE: JUNE 20, 1941
	PLAN NUMBER: 800-147

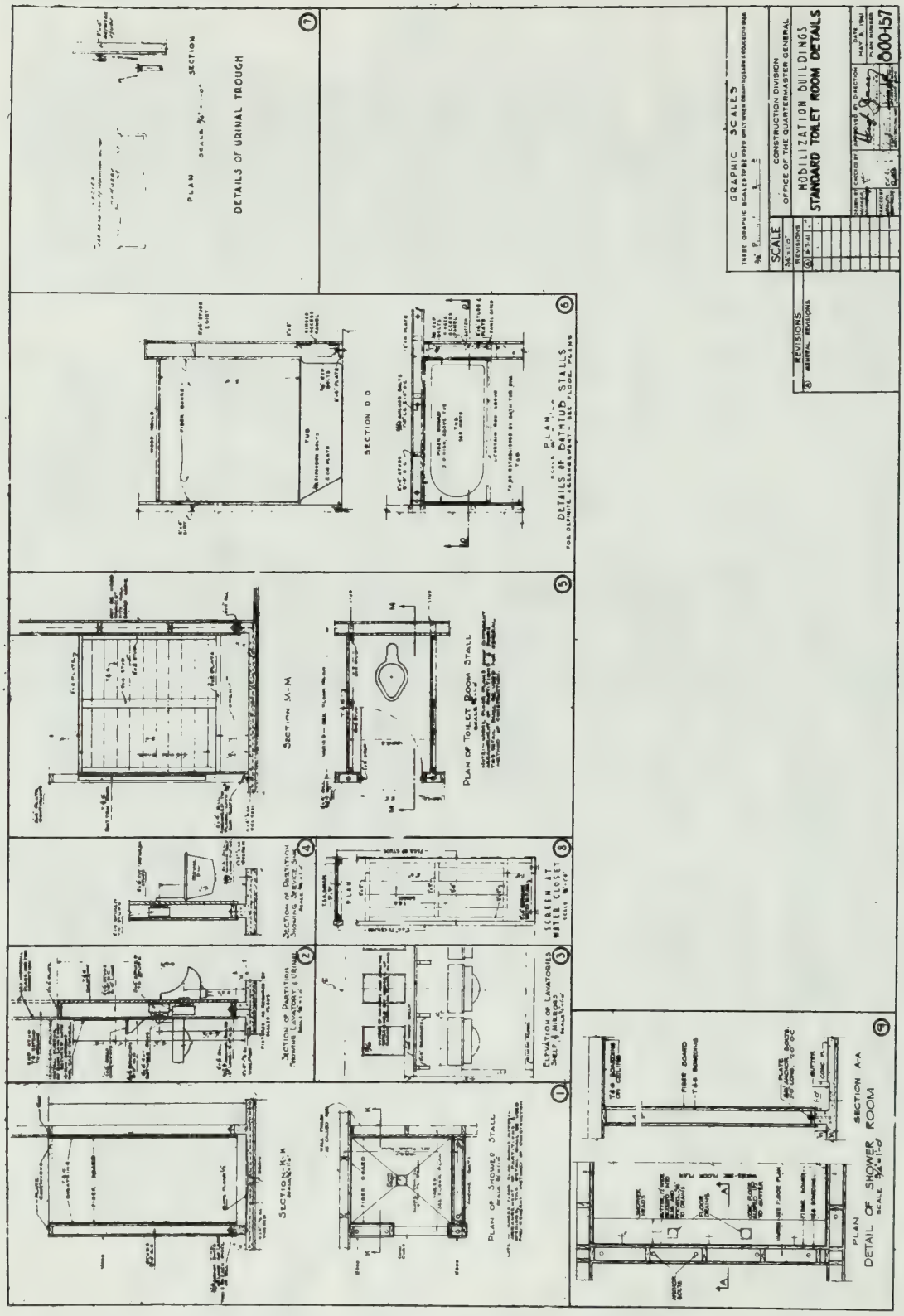
Plan Number 800-147

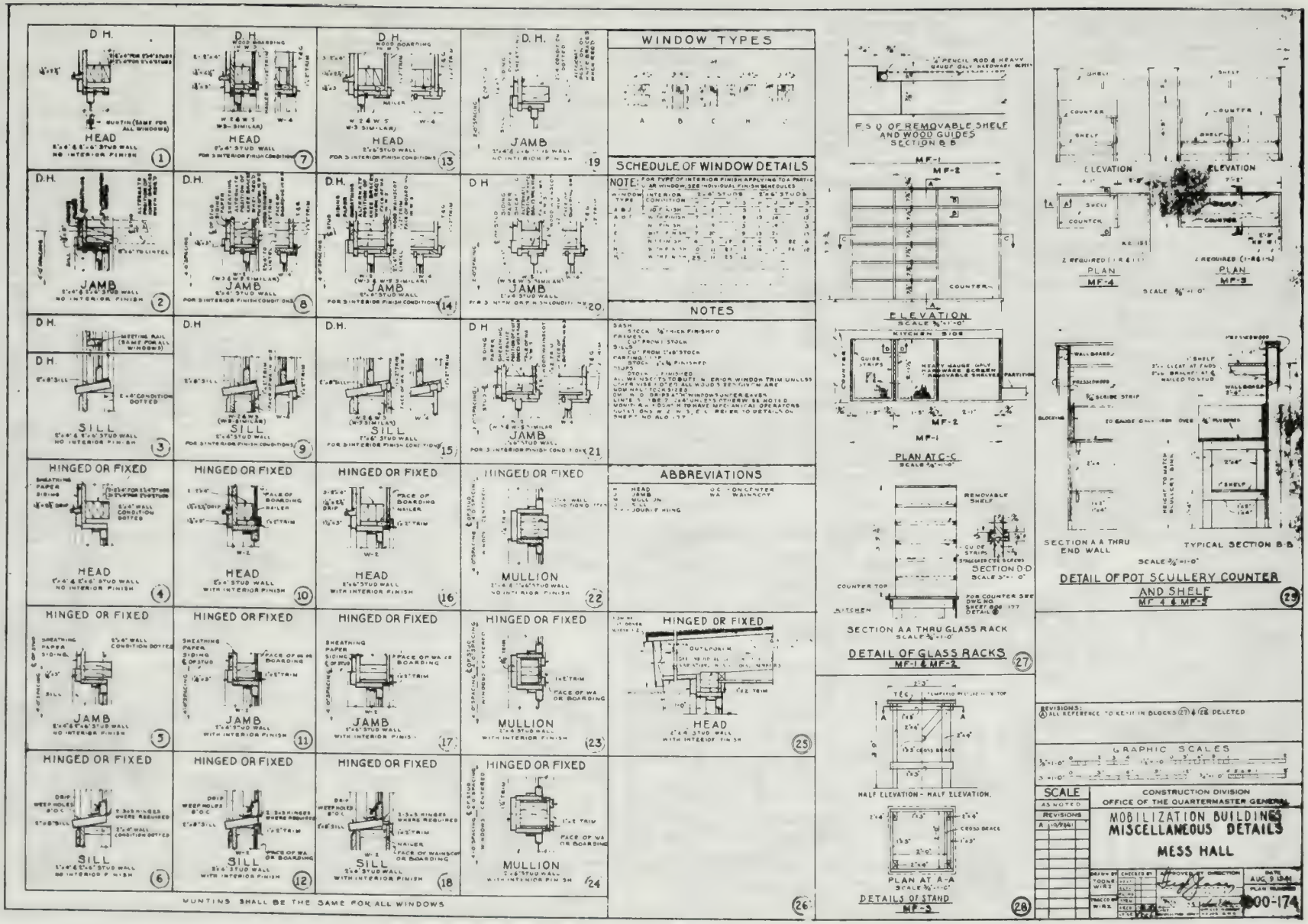
Plan Number 800-151

Plan Number 800-154



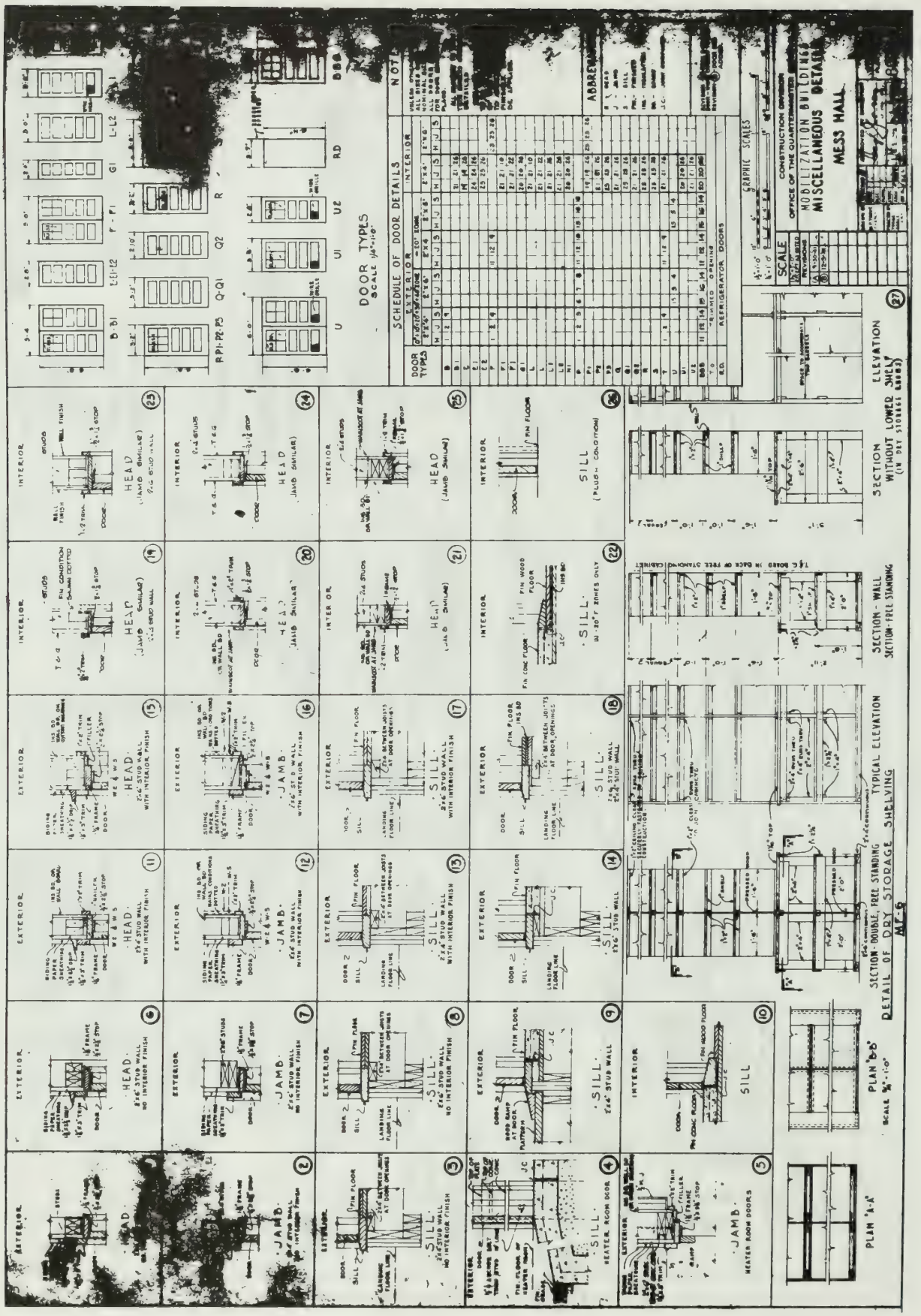
Plan Number 800-157



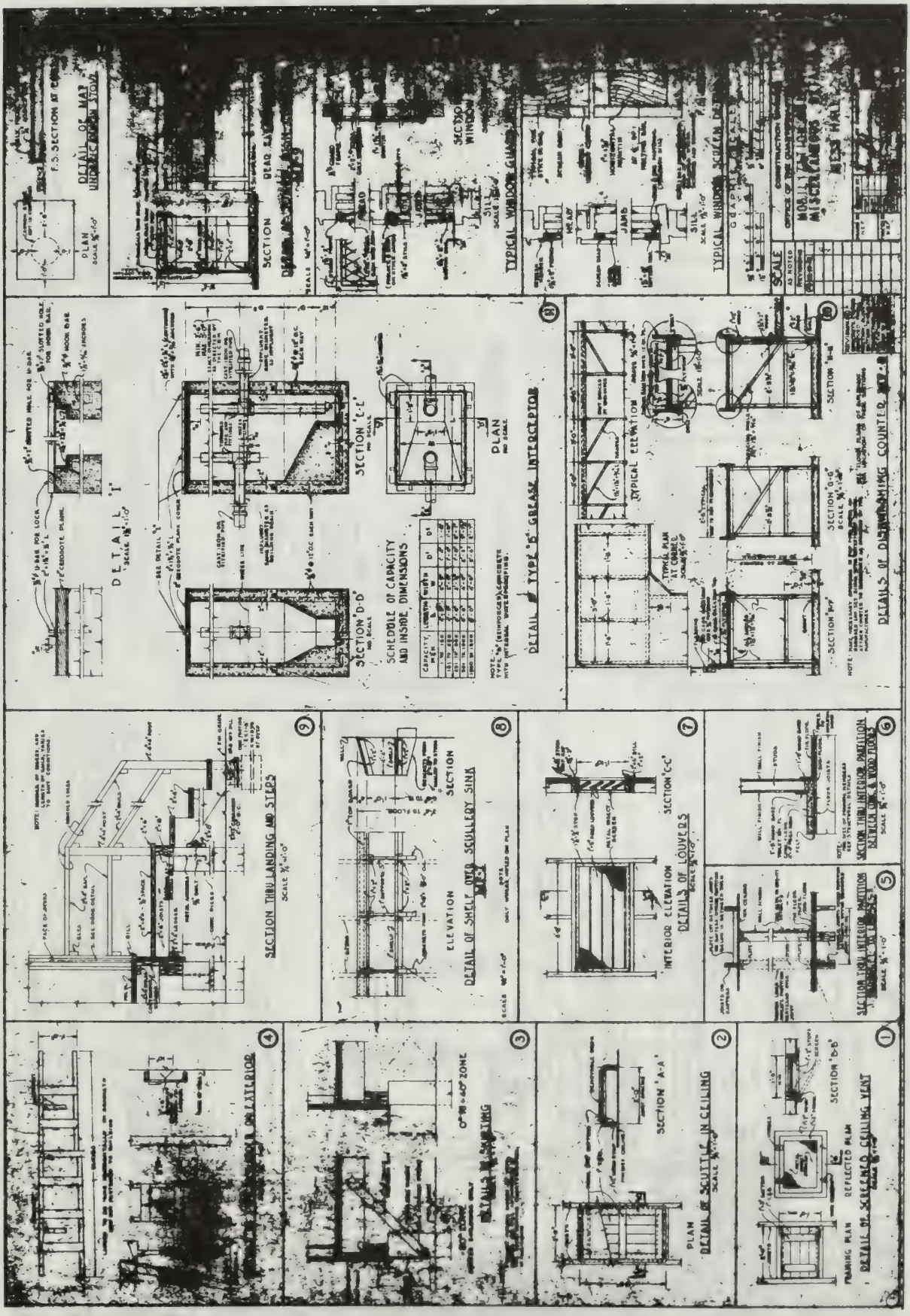


MUNTINS SHALL BE THE SAME FOR ALL WINDOWS

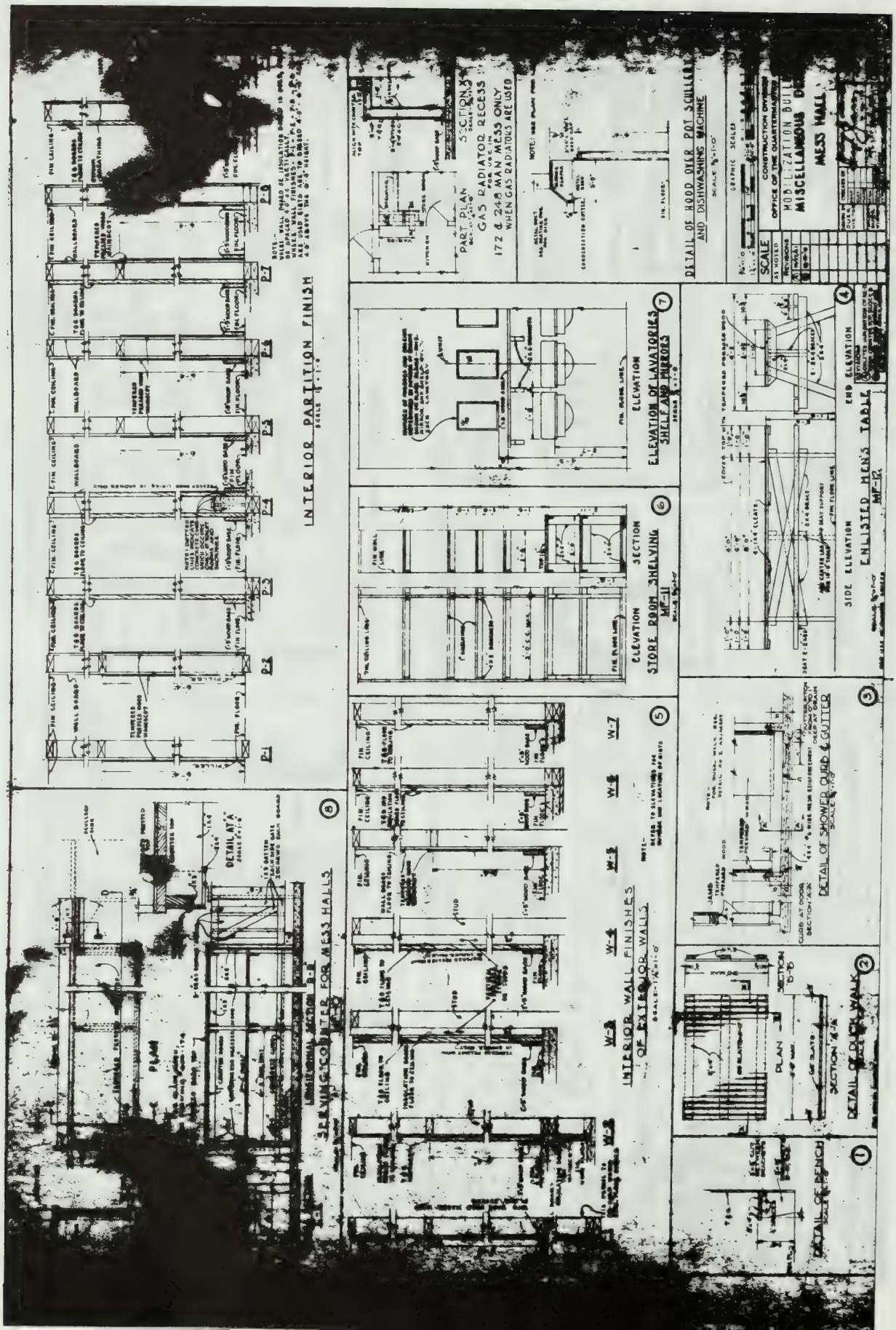
Plan Number 800-175

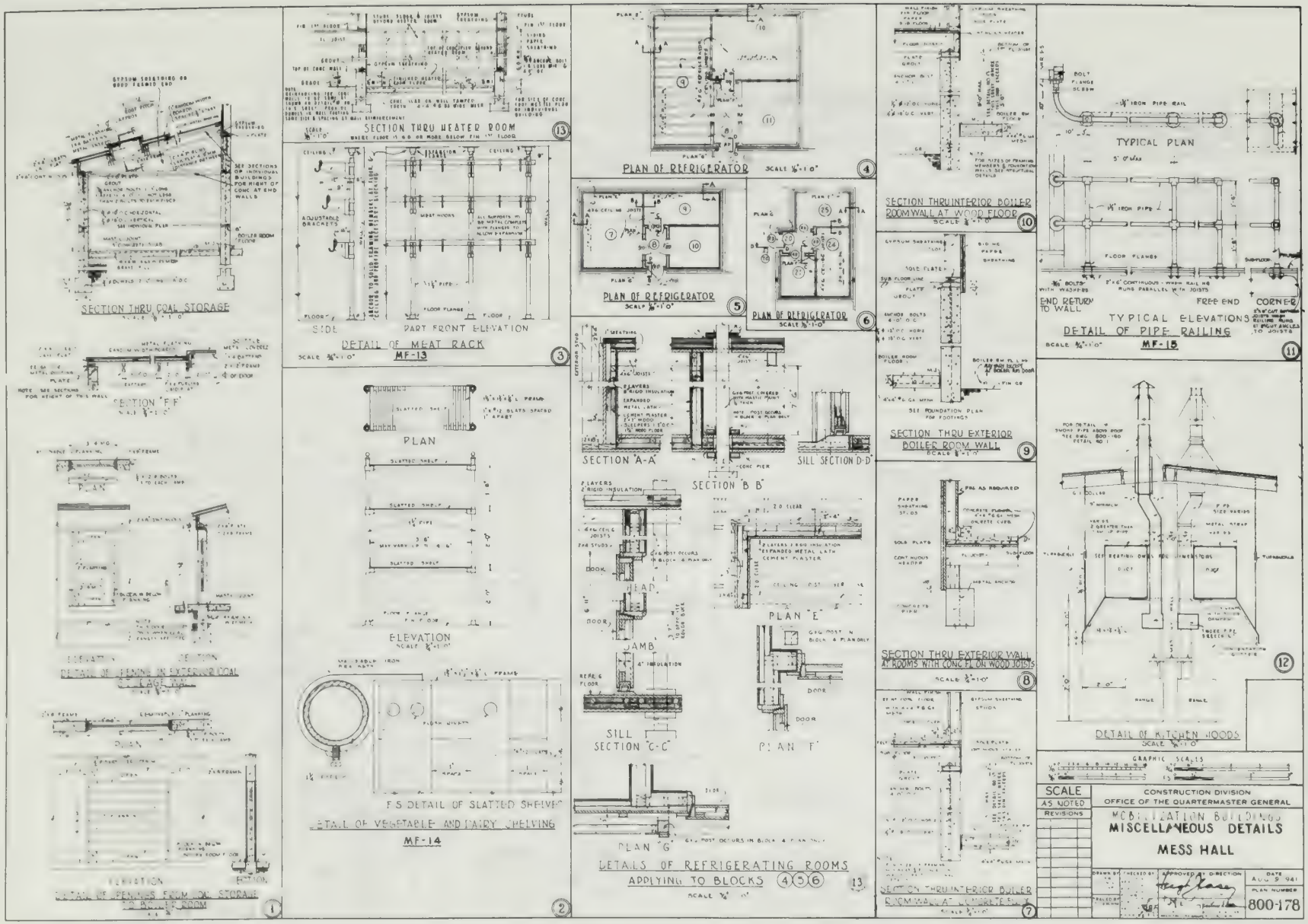


Plan Number 800-176



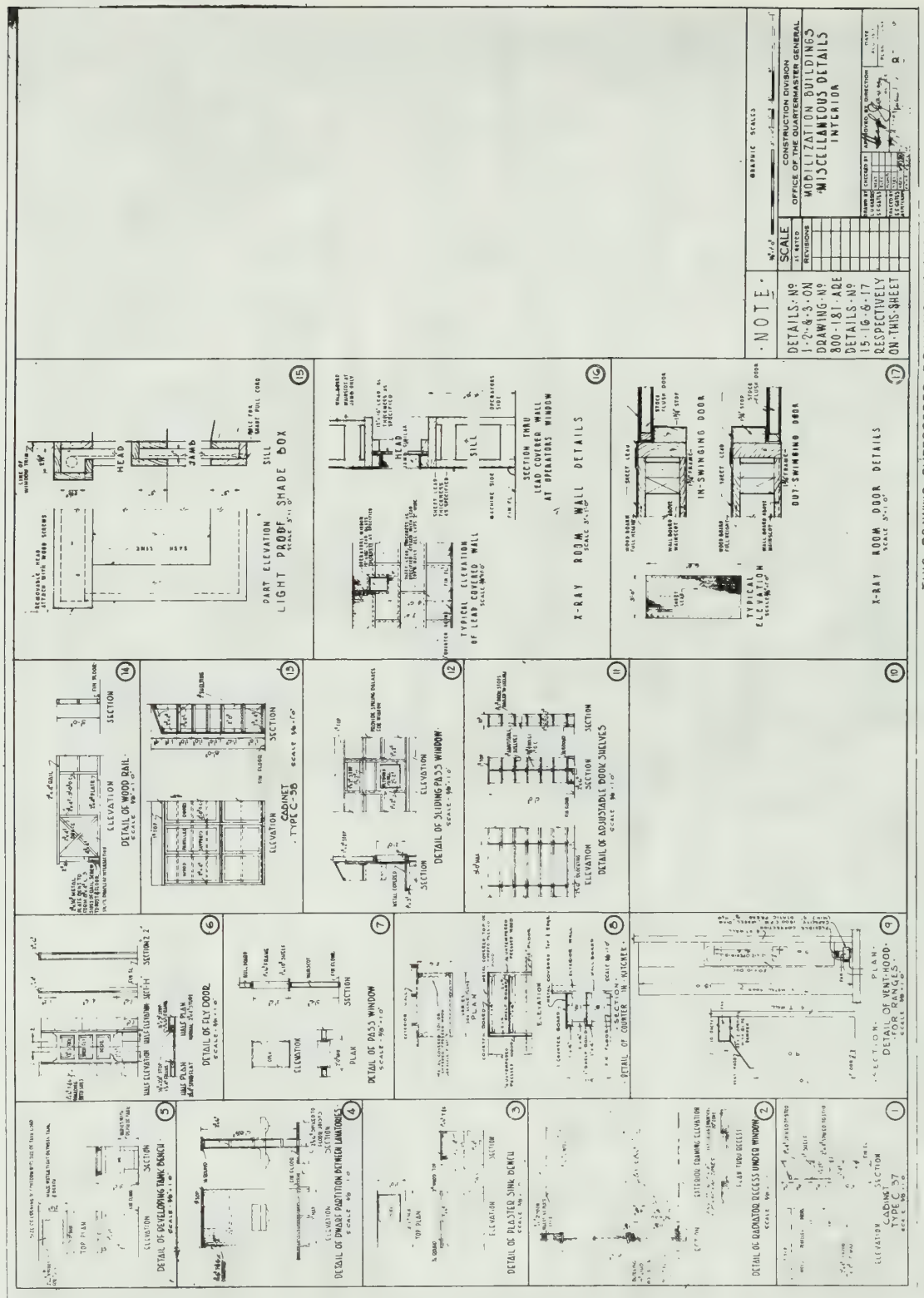
Plan Number 800-177

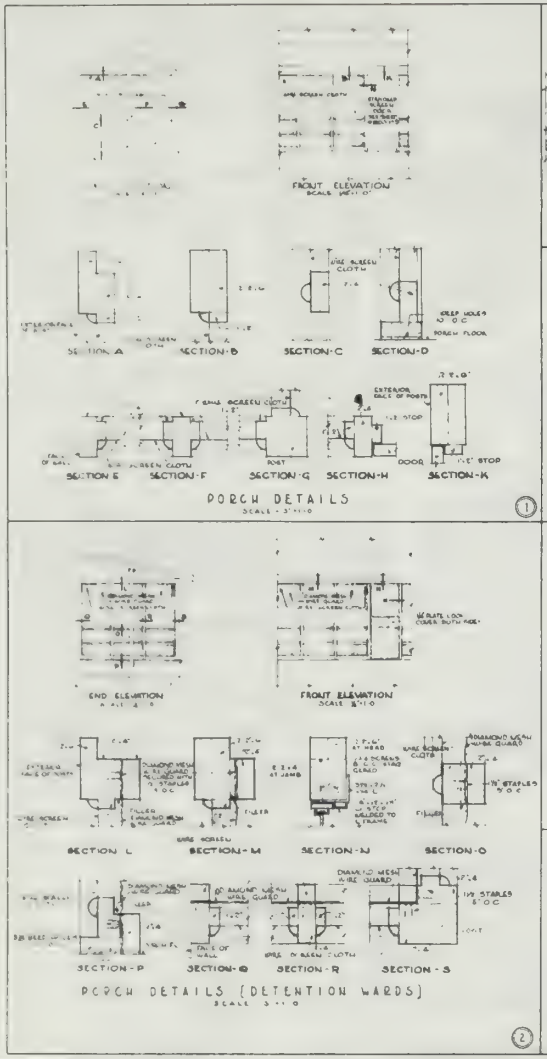


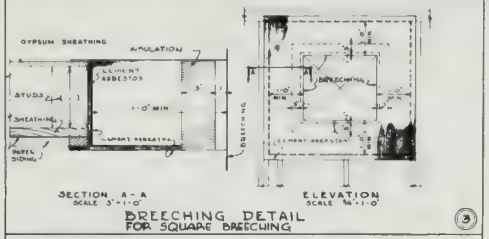


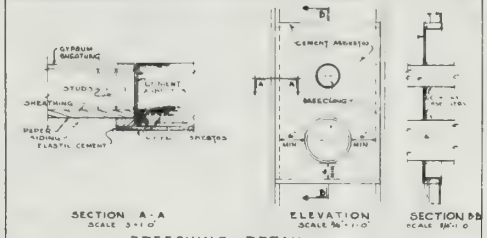
Plan Number 800-178

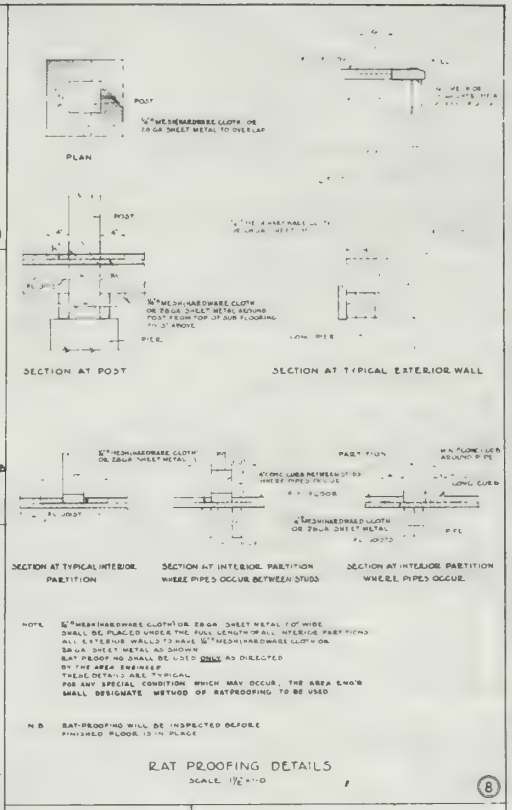
Plan Number 800-180

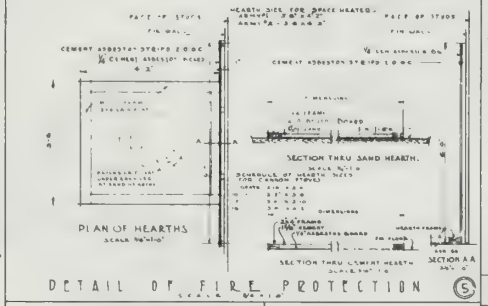


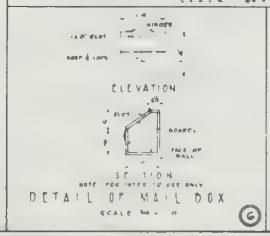


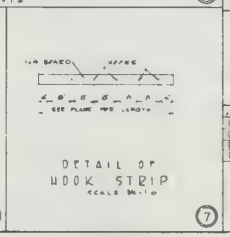












· N O T E ·

DETAILS · Nº 1 4 6 5 ON · DRAWING Nº 800-188 · ARE · DETAILS · Nº 5 · 6 · 8 · 7 RESPECTIVELY · ON · THIS · SHEET.

REVISIONS	
A	SECTION "M" DETAILS BB & CC
B	ADDITION OF DETAIL NO 8 RAT PROOFING
C	GENL REVISIONS TO DETAIL Nº 3 465
	HEARTH DETAILS REVISED

GRAPHIC SCALES

THESE GRAPHIC SCALES TO BE USED ONLY WHEN DRAWINGS ARE REDUCED IN SIZE

SCALE AS NOTED

CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL

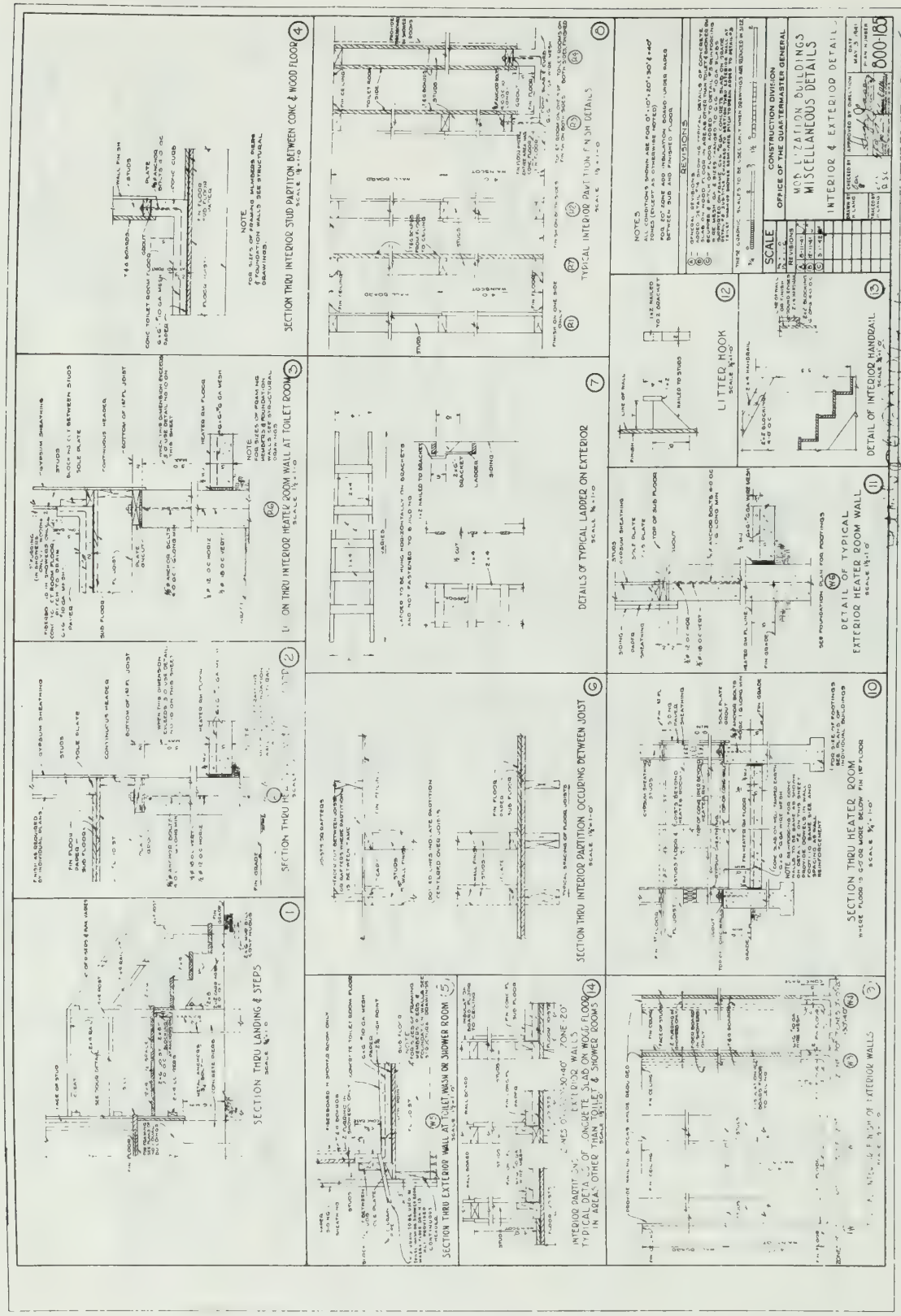
MOBILIZATION BUILDINGS

MISCELLANEOUS DETAILS

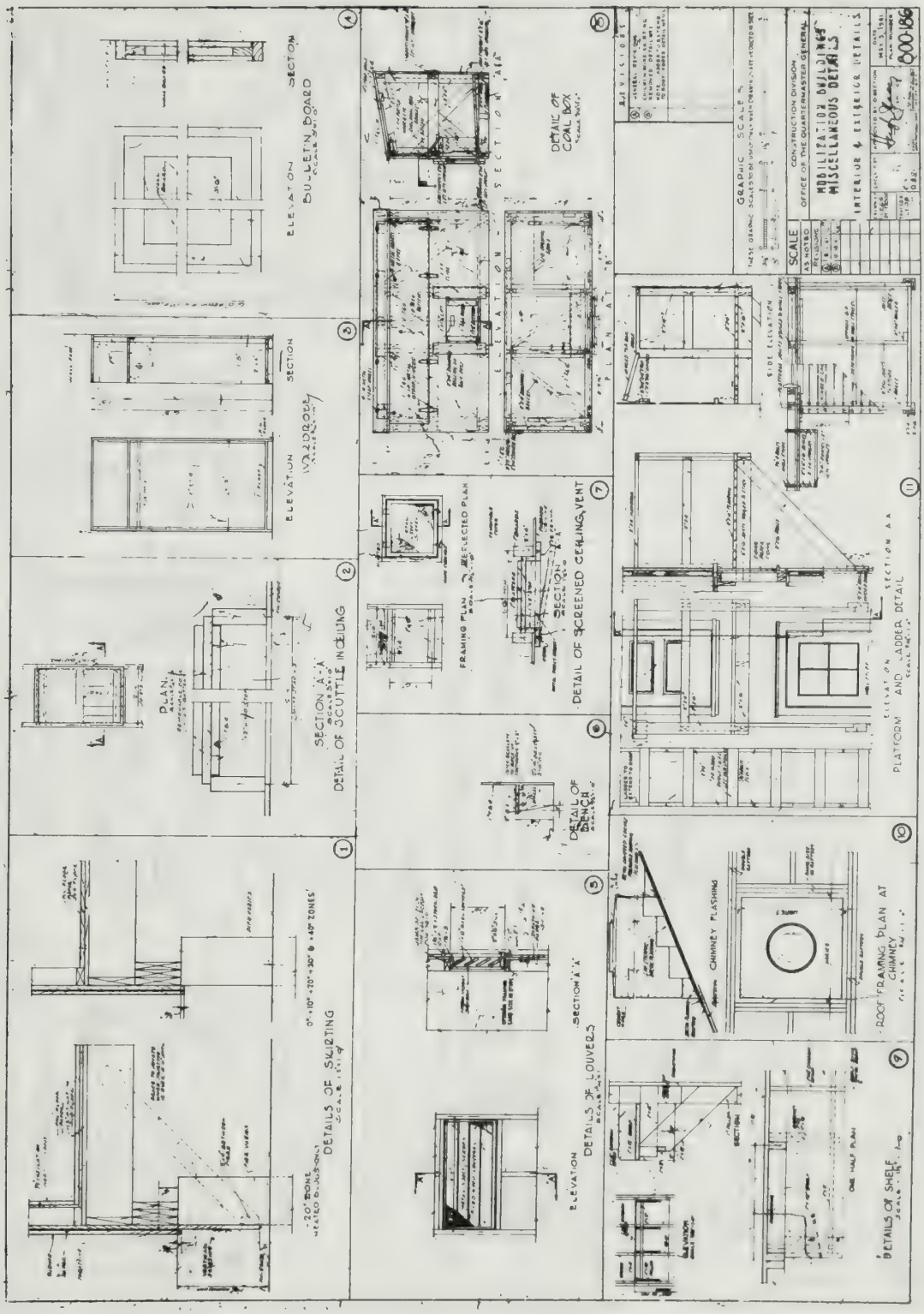
800-182

THIS DRAWING SUPERSEDES DRAWING Nº 800-168 SEE NOTE ABOVE

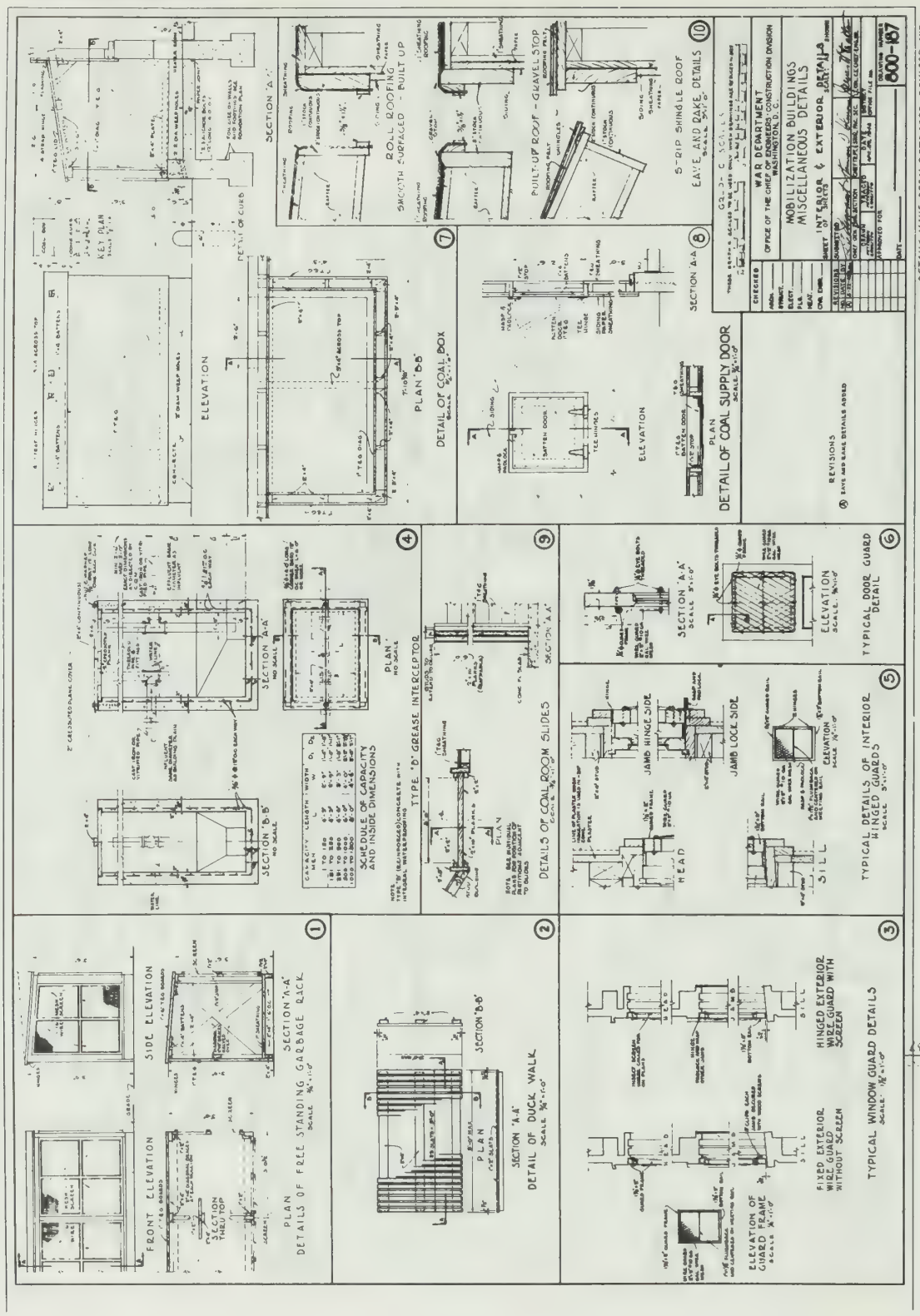
Plan Number 800-185



Plan Number 800-186



Plan Number 800-187



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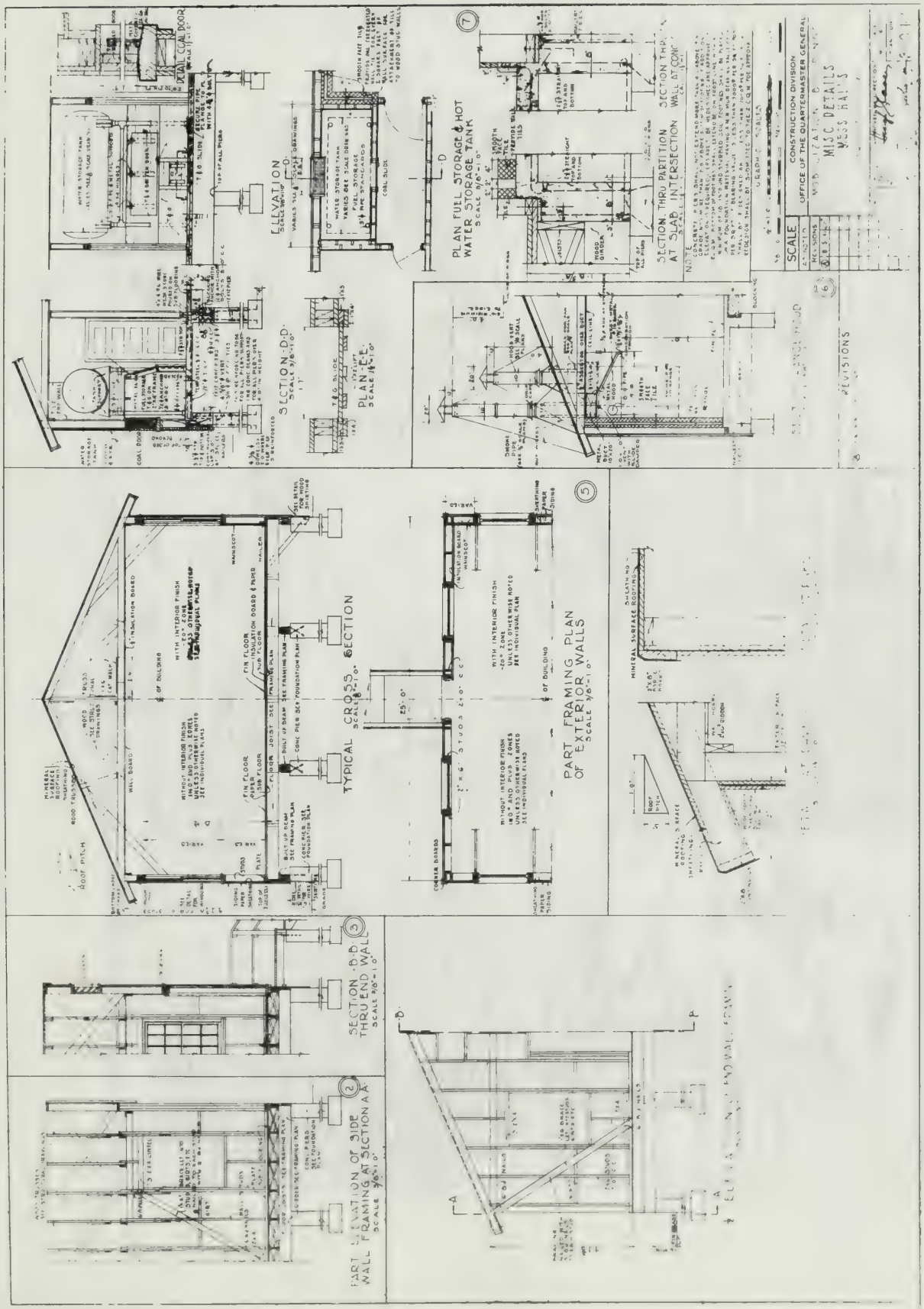

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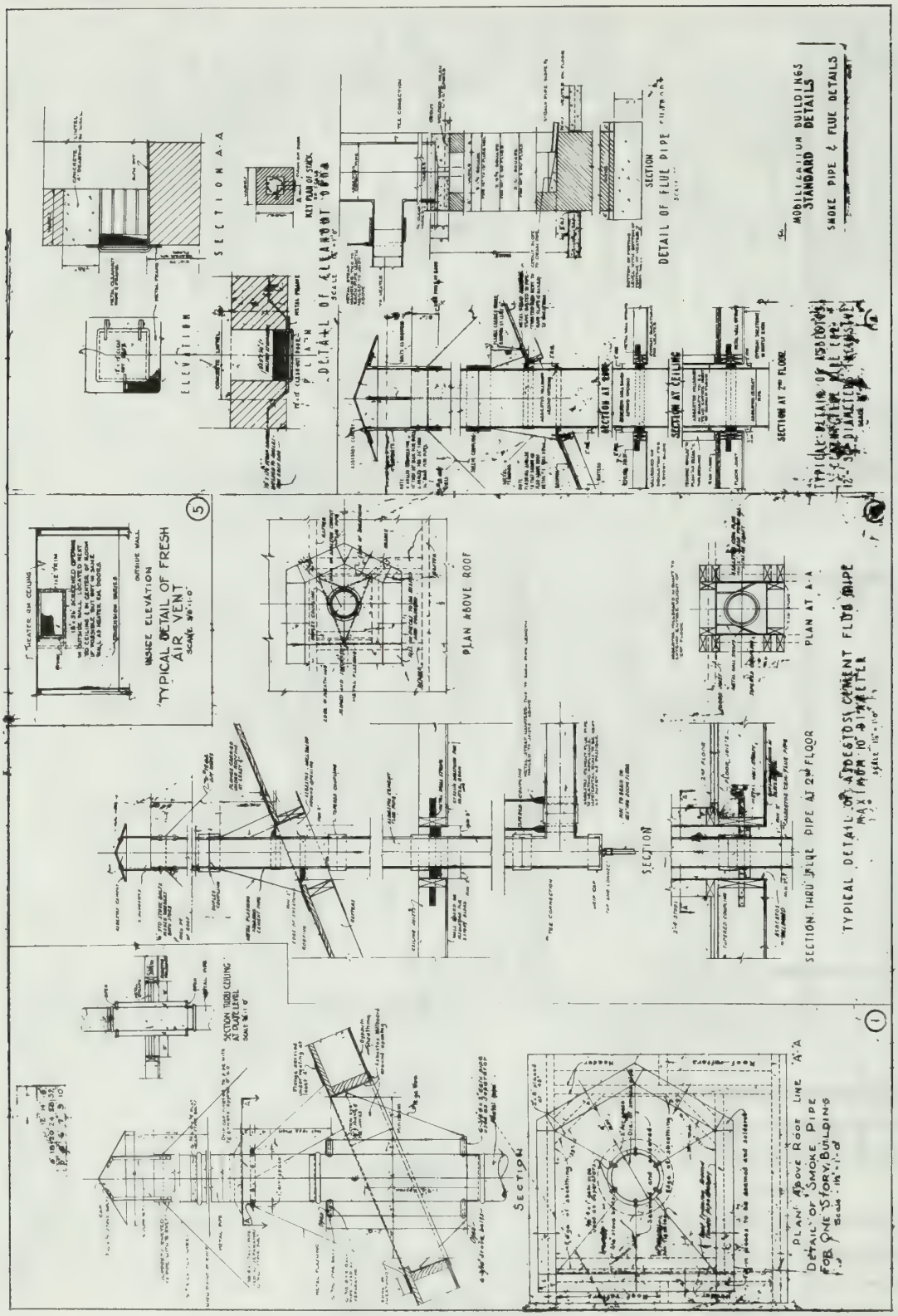
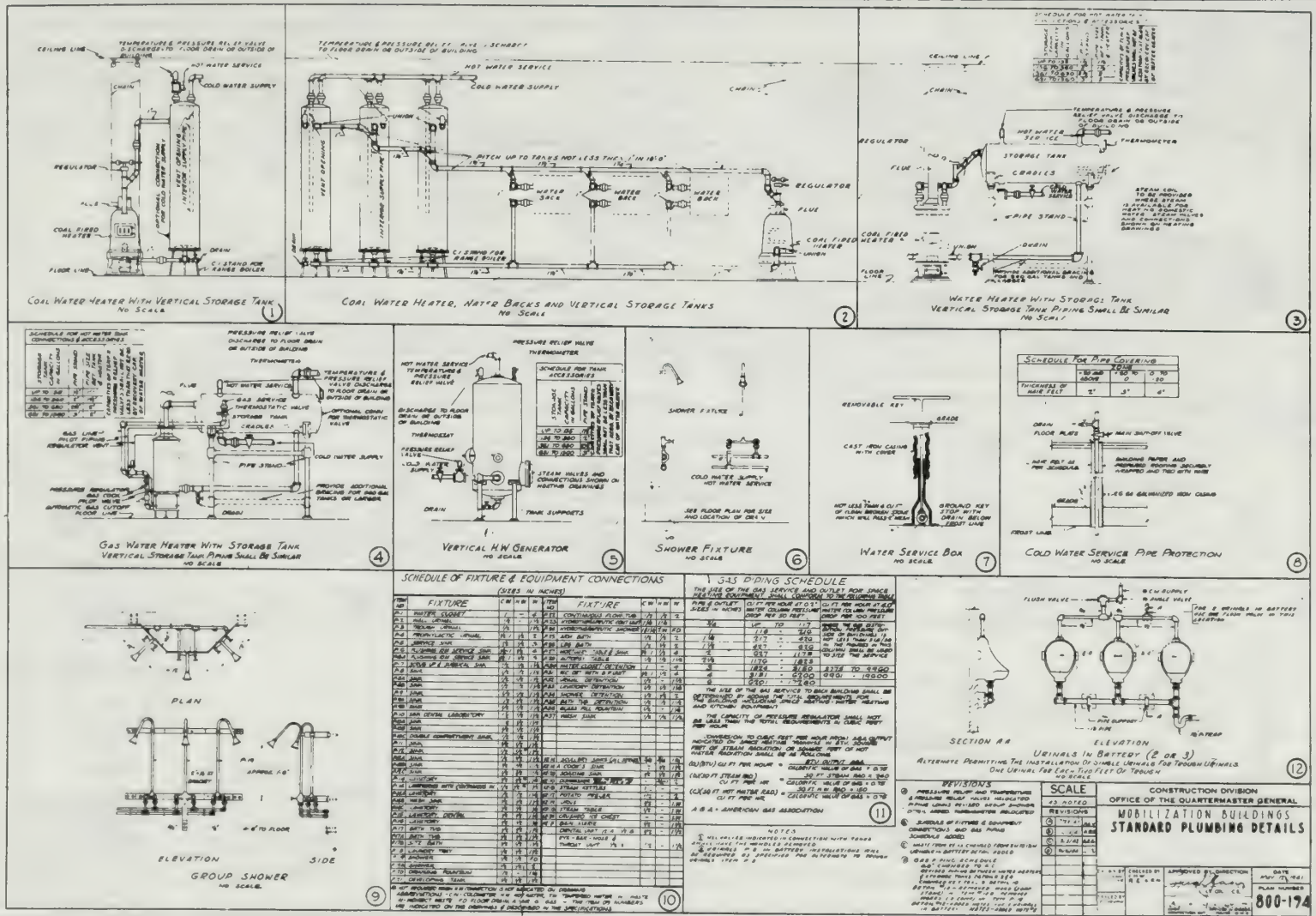
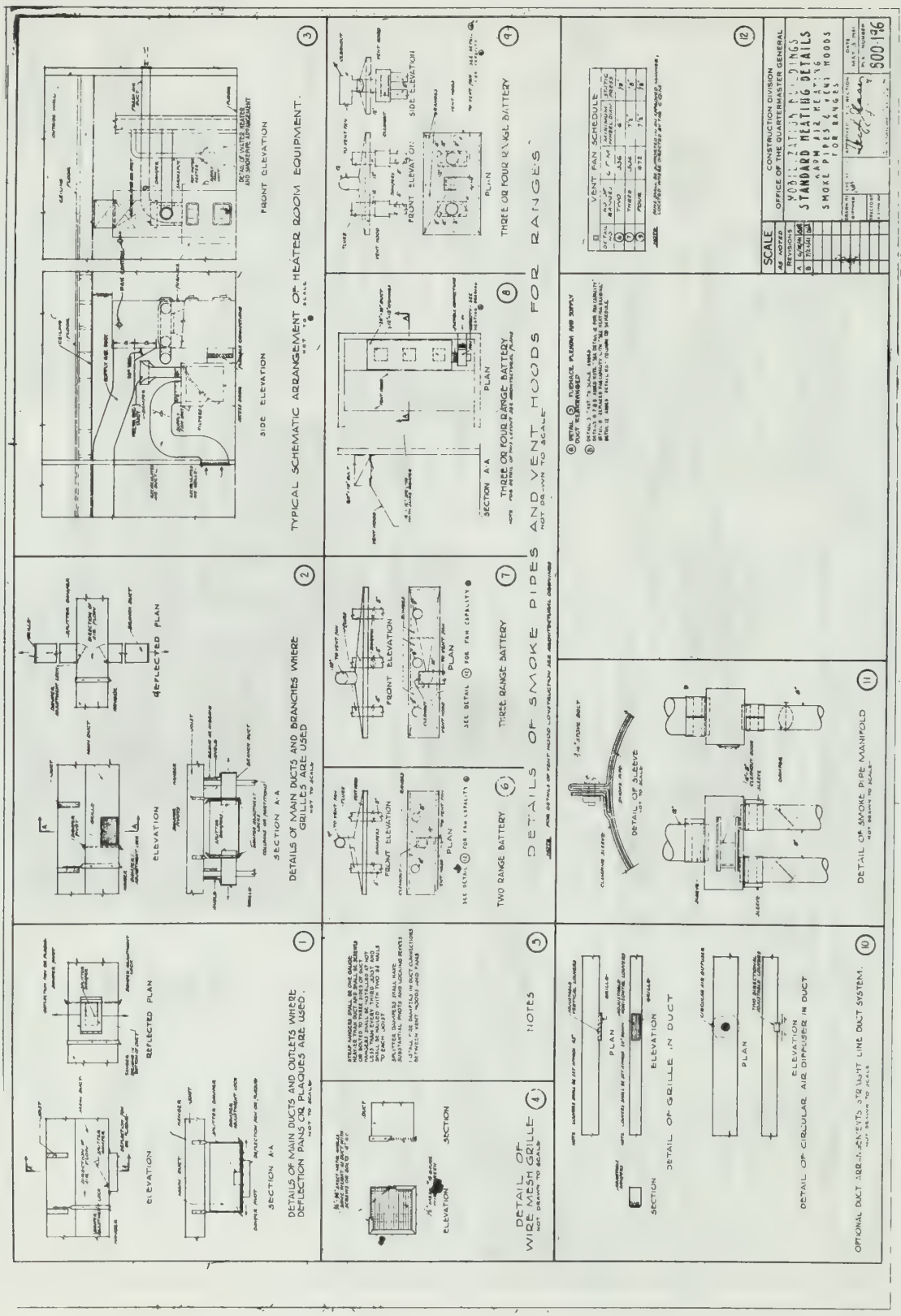
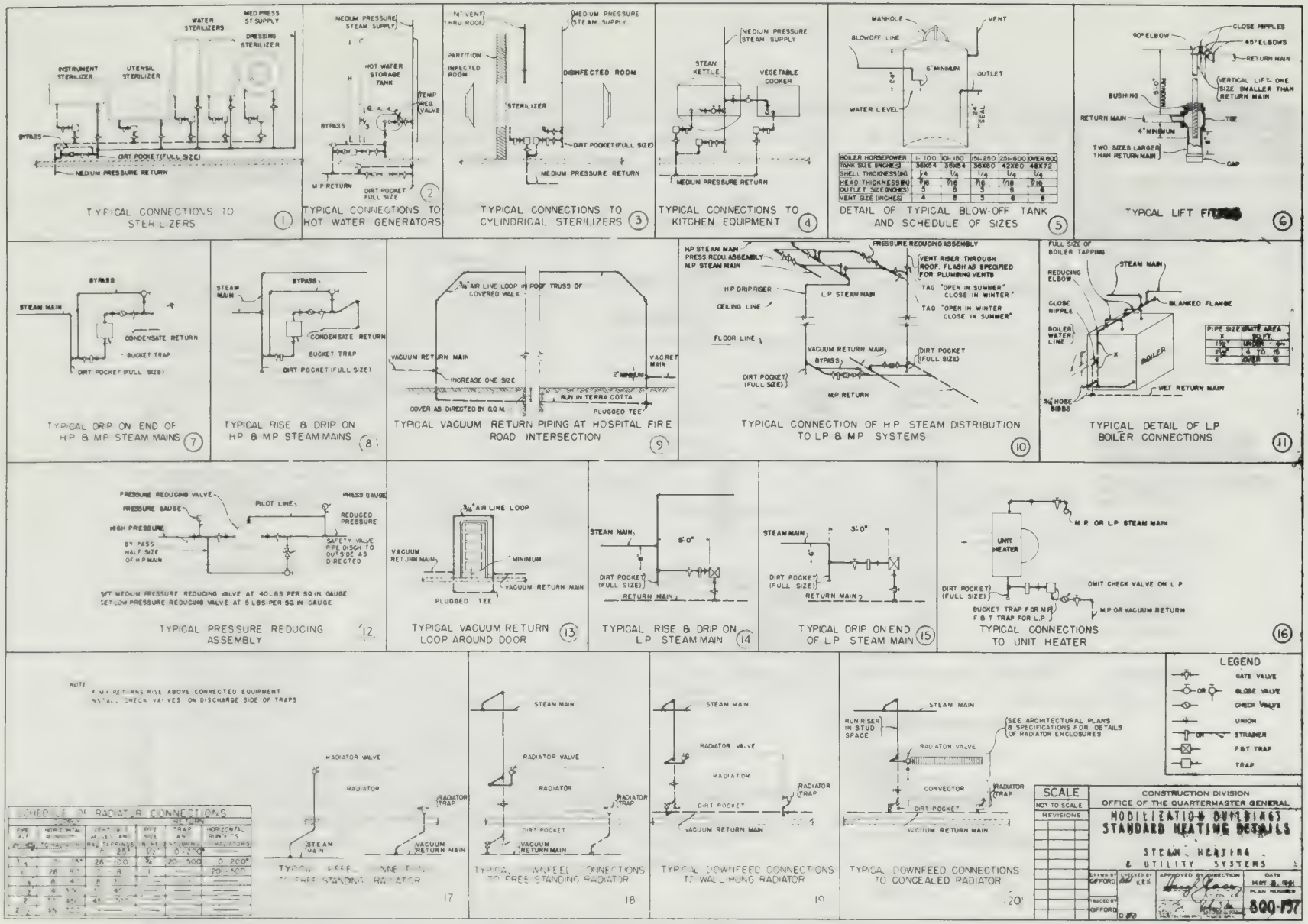




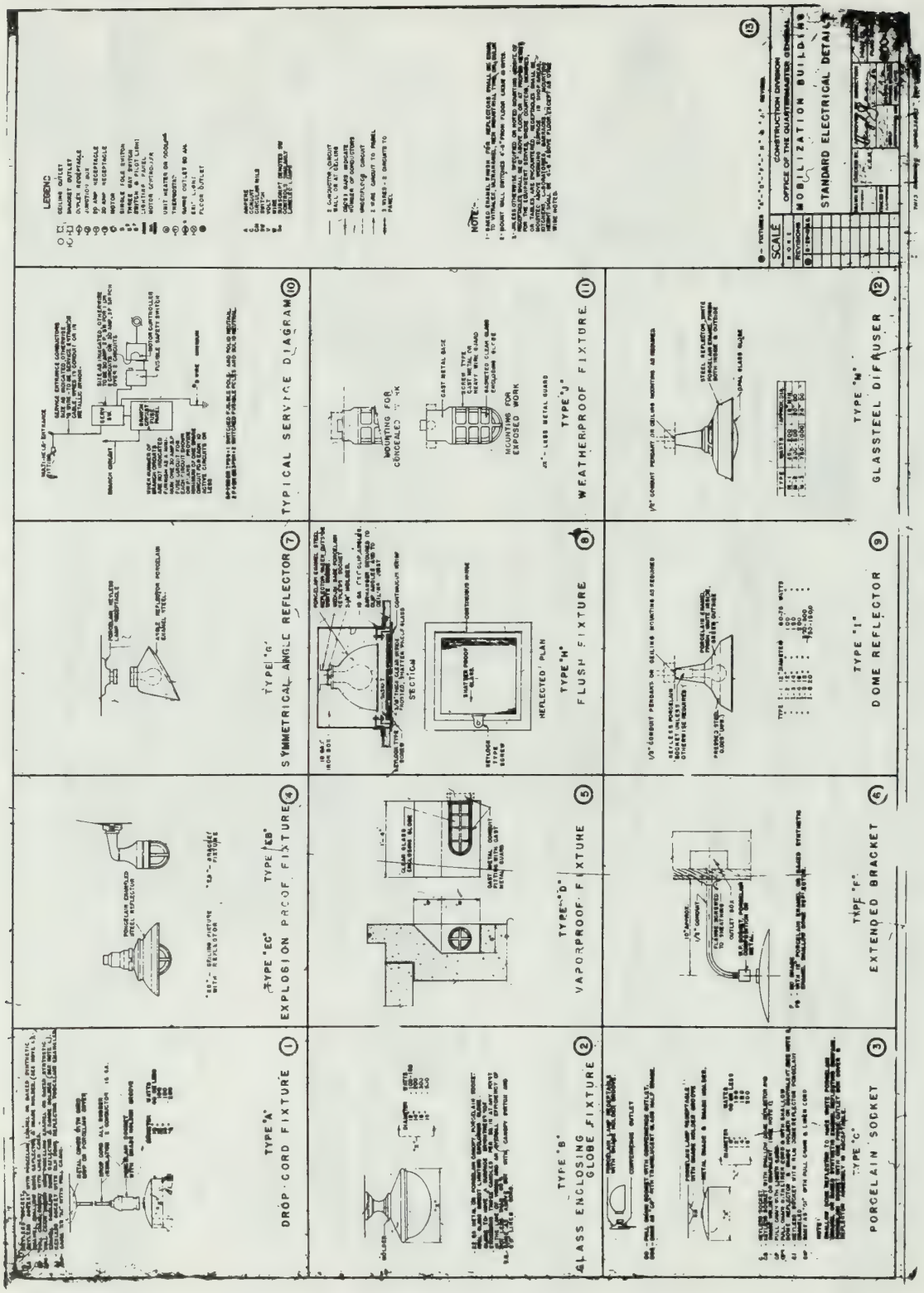
DRAWING & SIGNATURES RETRACED 3 5 42

Plan Number 800-196

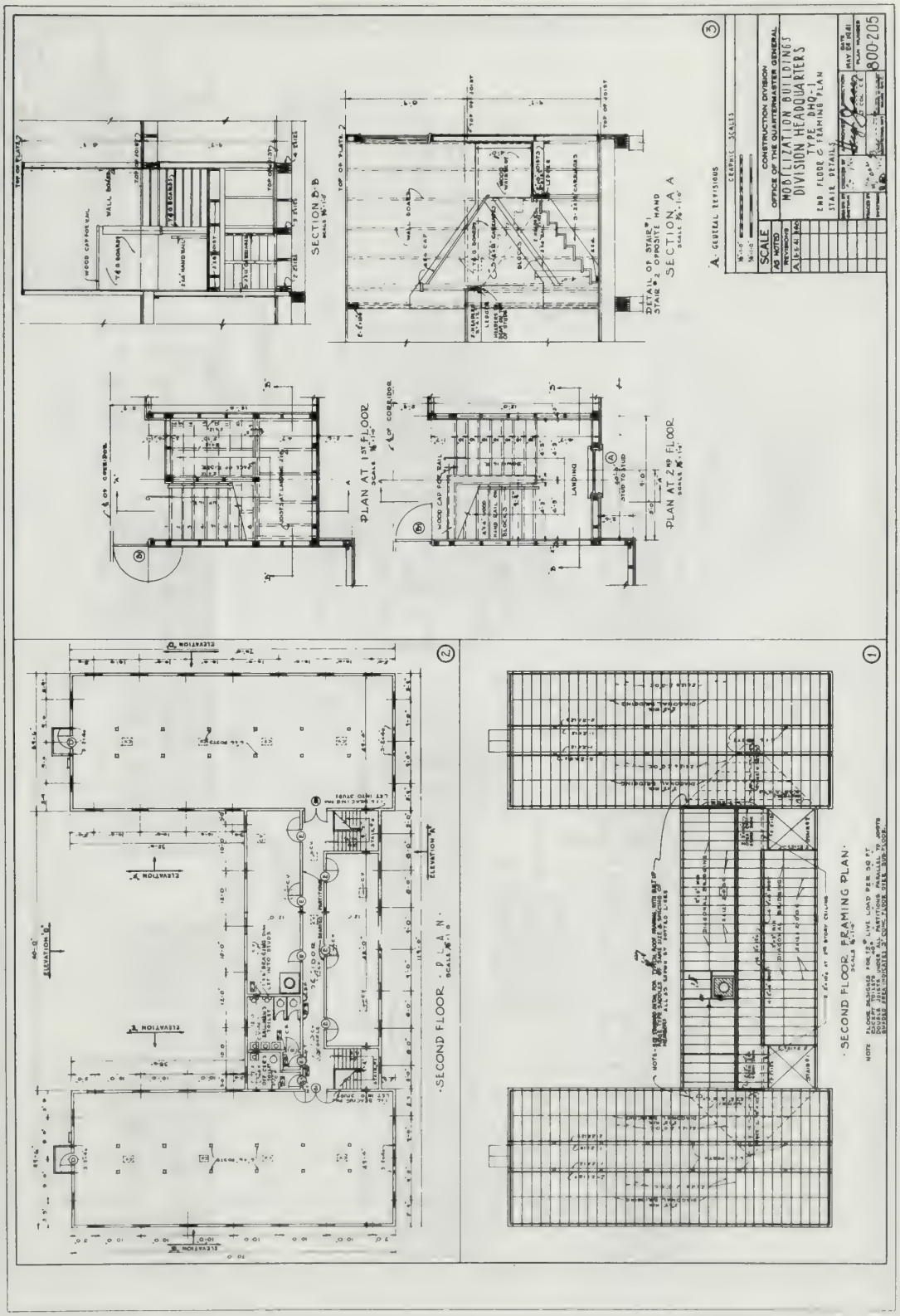



TYPICAL CONNECTIONS TO STERILIZERS (1)
TYPICAL CONNECTIONS TO HOT WATER GENERATORS (2)
TYPICAL CONNECTIONS TO CYLINDRICAL STERILIZERS (3)
TYPICAL CONNECTIONS TO KITCHEN EQUIPMENT (4)
DETAIL OF TYPICAL BLOW-OFF TANK AND SCHEDULE OF SIZES (5)
TYPICAL LIFT FI (6)
TYPICAL DRIP ON END OF H.P. & M.P. STEAM MAINS (7)
TYPICAL RISE & DRIP ON H.P. & M.P. STEAM MAINS (8)
TYPICAL VACUUM RETURN PIPING AT HOSPITAL FIRE ROAD INTERSECTION (9)
TYPICAL CONNECTION OF H.P. STEAM DISTRIBUTION TO L.P. & M.P. SYSTEMS (10)
TYPICAL DETAIL OF L.P. BOILER CONNECTIONS (11)
TYPICAL PRESSURE REDUCING ASSEMBLY (12)
TYPICAL VACUUM RETURN LOOP AROUND DOOR (13)
TYPICAL RISE & DRIP ON L.P. STEAM MAIN (14)
TYPICAL DRIP ON END OF L.P. STEAM MAIN (15)
TYPICAL CONNECTIONS TO UNIT HEATER (16)
TYPICAL FREE STANDING RADIATOR (17)
TYPICAL DOWNFEED CONNECTIONS TO FREE STANDING RADIATOR (18)
TYPICAL DOWNFEED CONNECTIONS TO WALL-HUNG RADIATOR (19)
TYPICAL DOWNFEED CONNECTIONS TO CONCEALED RADIATOR (20)
LEGEND
GATE VALVE
GLOBE VALVE
CHECK VALVE
UNION
STRAINER
F&T TRAP
TRAP
SCALE
NOT TO SCALE
CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL
MOBILIZATION BUILDINGS
STANDARD HEATING DETAILS
STEAM, HEATING & UTILITY SYSTEMS
PLAN NUMBER 800-197

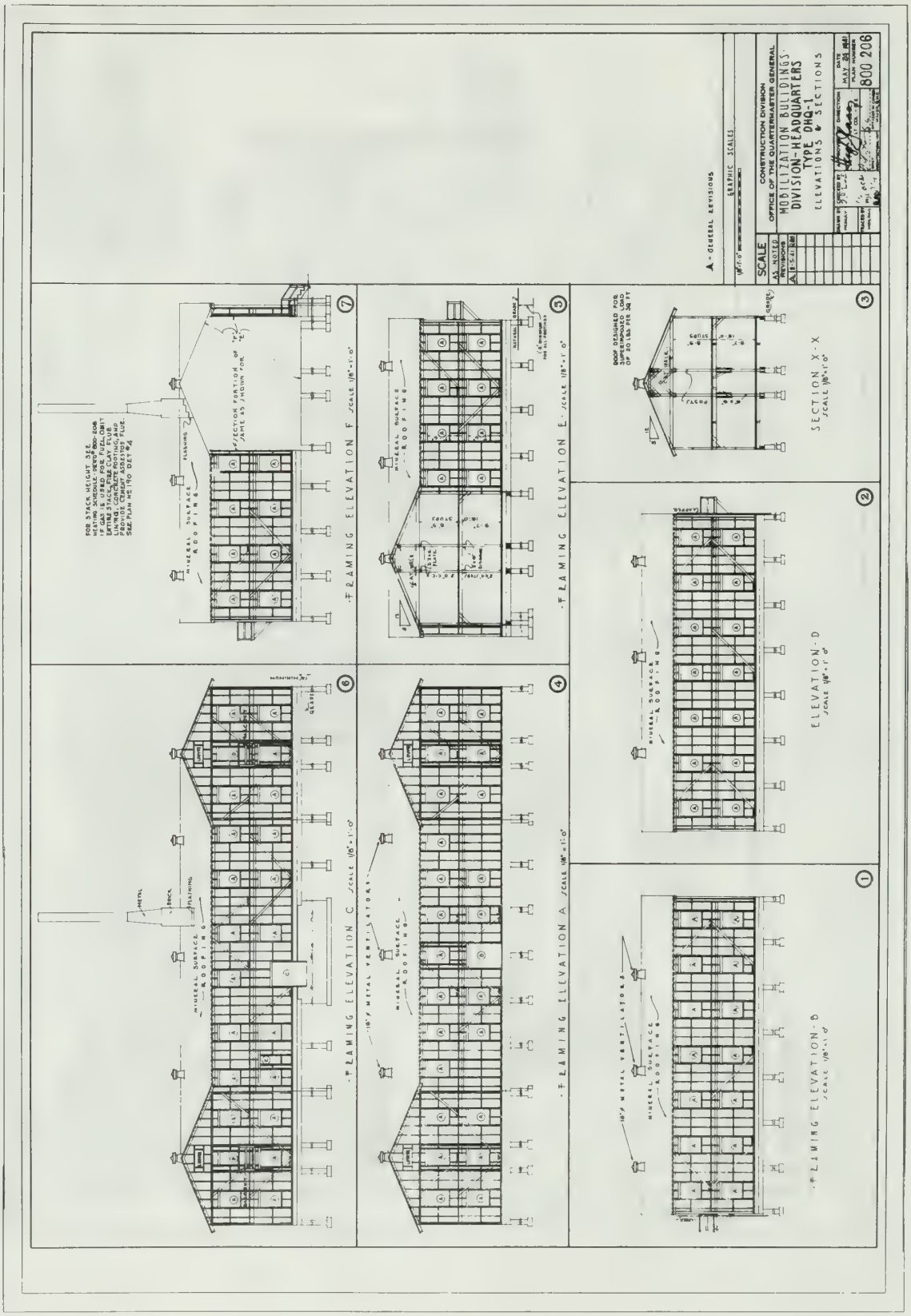
Plan Number 800-199



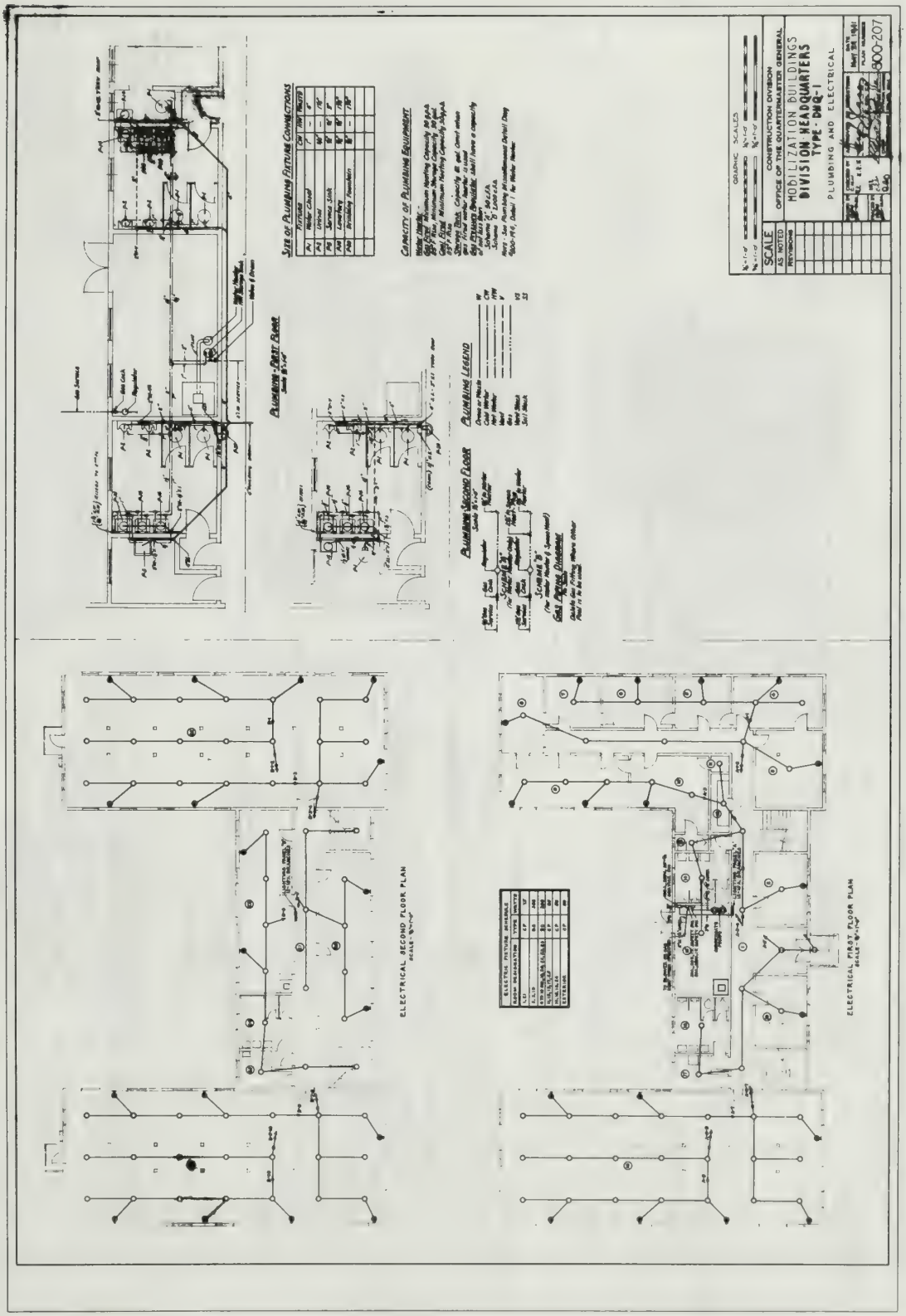
Plan Number 800-205



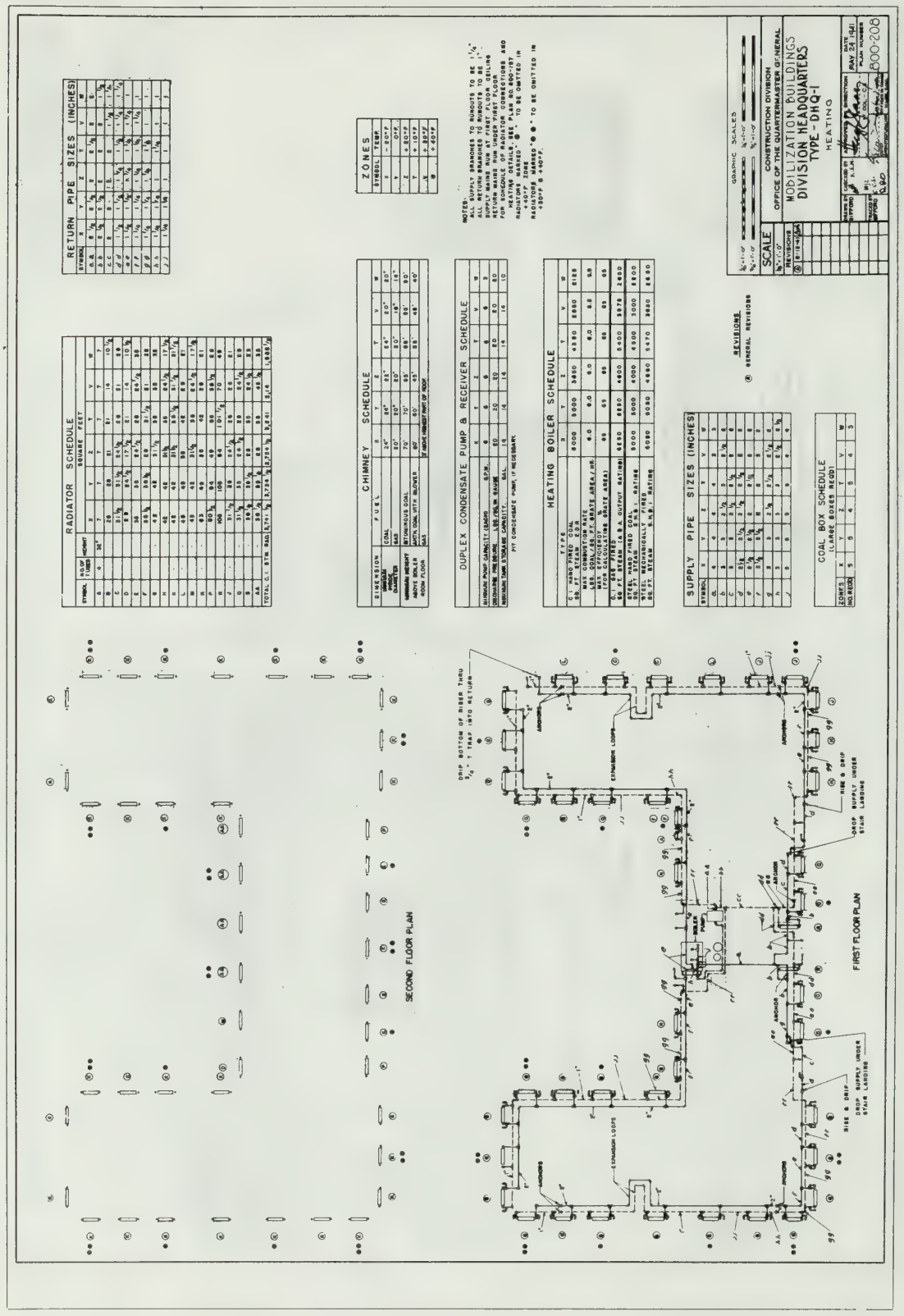
Plan Number 800-206

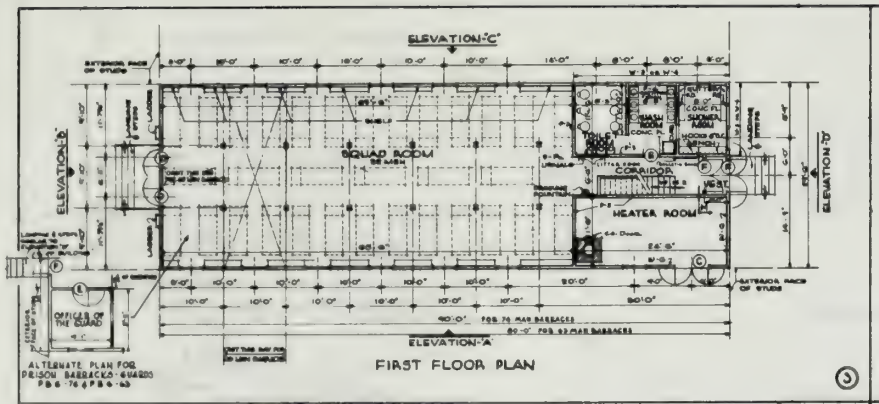


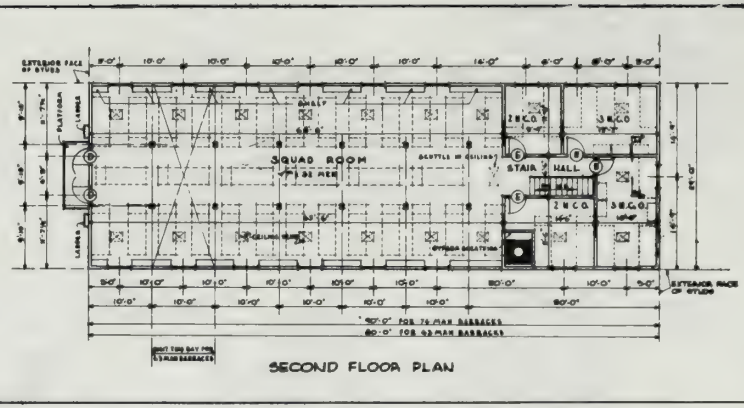
Plan Number 800-207

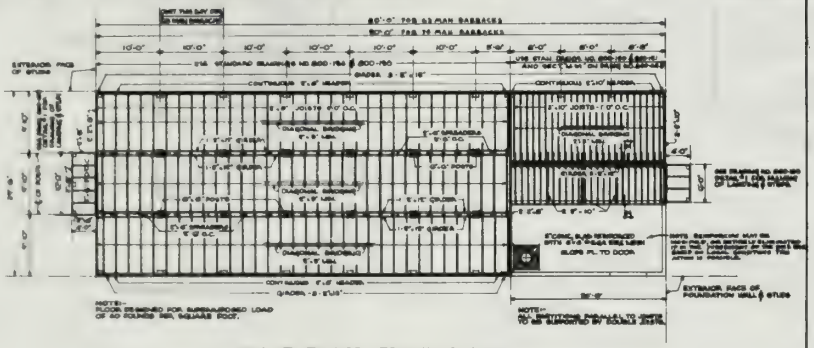


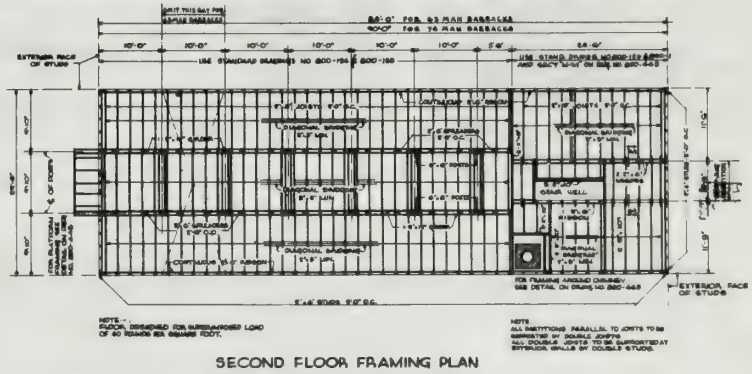
Plan Number 800-208

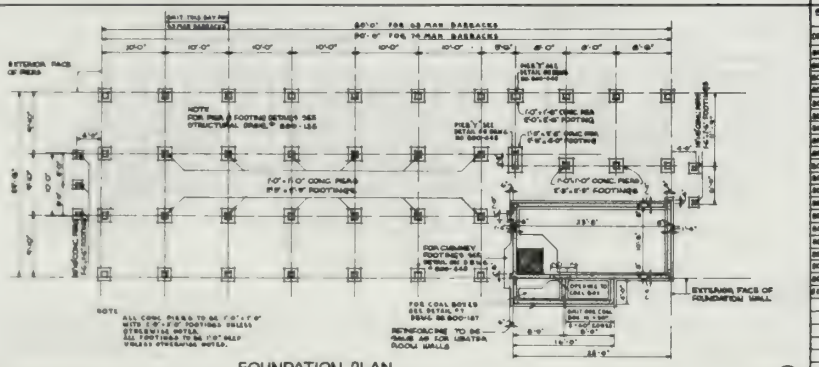












SET OF DRAWING NUMBERS APPLYING TO THIS BUILDING

DRAWING NO.	TITLE	DETAILS
800-449	PLANS	
800-444	FRAMING ELEVATIONS	
800-448	MISC. DETAILS	
800-446	ELECTRICAL & PLUMBING	
800-447	HEATING	
800-134		
800-190		
800-180		
800-117		
800-181	STANDARD DOOR DETAILS	
800-184	STANDARD DOOR DETAILS	
800-187	STANDARD TOILET DETAILS	8-8-6 -8
800-189	MISC. DETAILS	1-8-4-8-7-6-9-11-18
800-186	MISC. DETAILS	1-8-6-8-7-9-10
800-187	MISC. DETAILS	E7-10
800-190	SHOWER PIPE & FLUE DETAILS	E-8-6
800-194	STANDARD PLUMBING DETAILS	
800-196	SHOWER AND HEATING DETAILS	
800-199	STANDARD ELECTRICAL DETAILS	
800-4421	ALTERNATE LAYOUT FOR STEAM HEATING SYSTEM	

GENERAL NOTES

1. DIMENSIONS ARE TO OUTSIDE FACE OF STUDS AND TO CENTERLINES OF PARTITIONS.
2. UNLESS OTHERWISE NOTED ALL INTERIOR PARTITIONS ARE 2"x4" STUDS.
3. 60" ZONES INTERIOR FINISH OF EXTERIOR WALLS TO BE BUT WALLBOARD OTHERWISE NOTED
4. IN 60", 101", 150", 80" & 140" ZONES INTERIOR FINISH OF EXTERIOR WALLS TO BE OMITTED UNLESS OTHERWISE NOTED
5. ALL INTERIOR PARTITIONS TO BE TYPE P-1 UNLESS OTHERWISE NOTED
6. UNLESS OTHERWISE NOTED CEILING FINISHES FOR 60", 101", 150", 80" & 140" ZONES TO BE AS SHOWN ON TYPICAL CROSS SECTION ON DRAWING NO. 800-184.
7. PROVIDE FULL LENGTH WINDOW SCREENS FOR ALL WINDOWS EXCEPT WINDOWS IN HEATER ROOM.
8. PROVIDE SHELF AND HANGER OVER EACH LAVATORY.
9. LOWER HALF OF TOILET ROOM WINDOWS SHALL BE OBSCURE GLASS.
10. PROVIDE 6 COAL BOXES FOR 60", 101", 150" ZONES AND 1 COAL BOX FOR 80" & 140" ZONES.
11. COAL BOXES ARE NOT REQUIRED WHEN GAS IS USED FOR FUEL.
12. PROVIDE 8'-0" LADDER AND BRACKETS TO HOLD GAME TO TOP OF BUILDING.
13. FOR EXTERIOR FINISH BELOW TOP OF CONC. PIERS SEE DETAIL #1 DRAWING NO. 800-184.
14. ALL WALLS AND CEILING IN HEATER ROOM TO BE LINED WITH GYPSUM SHEATHING
15. INTERIOR OF ALL DUCT SHAFTS TO BE LINED WITH GYPSUM SHEATHING
16. ALL WALLS AND CEILING IN TOILET AND WASH ROOMS TO BE LINED WITH T & G BOARDS.
17. PORTION OF KNEE BRACES IN HEATER ROOM TO BE LOCATED BY PERSONS OF HEATING SYSTS.

REVISIONS

(A) INFORMATION FOR CONVERSION TO 63 MAN BARRACKS ADDED.
(B) INFORMATION FOR CONVERSION TO PRISON BARRACKS-GUARDS PBG-74 & PBG-63 ADDED
NOTE FOR REINFORCING OF COAL BOX WALLS ADDED.
(C) ADDED ALTERNATE LAYOUT FOR STEAM HEATING SYSTEM DRAWING NO. 800-4471
REMOVED DIMENSIONS PERTAINING TO CHIMNEY SIZES ADDED DETAIL NO. 8 TO SHOWER PIPE & FLUE DETAILS
(D) SMALL TERRACE CHANGED TO P.B. DETAILS NOTE ON REINFORCING ADDED

GRAPHIC SCALE

THIS GRAPHIC SCALE TO BE USED ONLY WHEN DRAWING IS REDUCED IN SIZE

SCALE 1/8"=1'-0"

REVISIONS

(A)	8-11-41	
(B)	8-18-41	
(C)	3-17-42	
(D)	6-16-42	

CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL

MOBILIZATION BUILDINGS
74 & 63 MAN BARRACKS
TYPES BKS-74 & BKS-63
PRISON BARRACKS-GUARDS TYPES PBG-74 & PBG-63
20'-6" WIDE BUILDING
PLANS

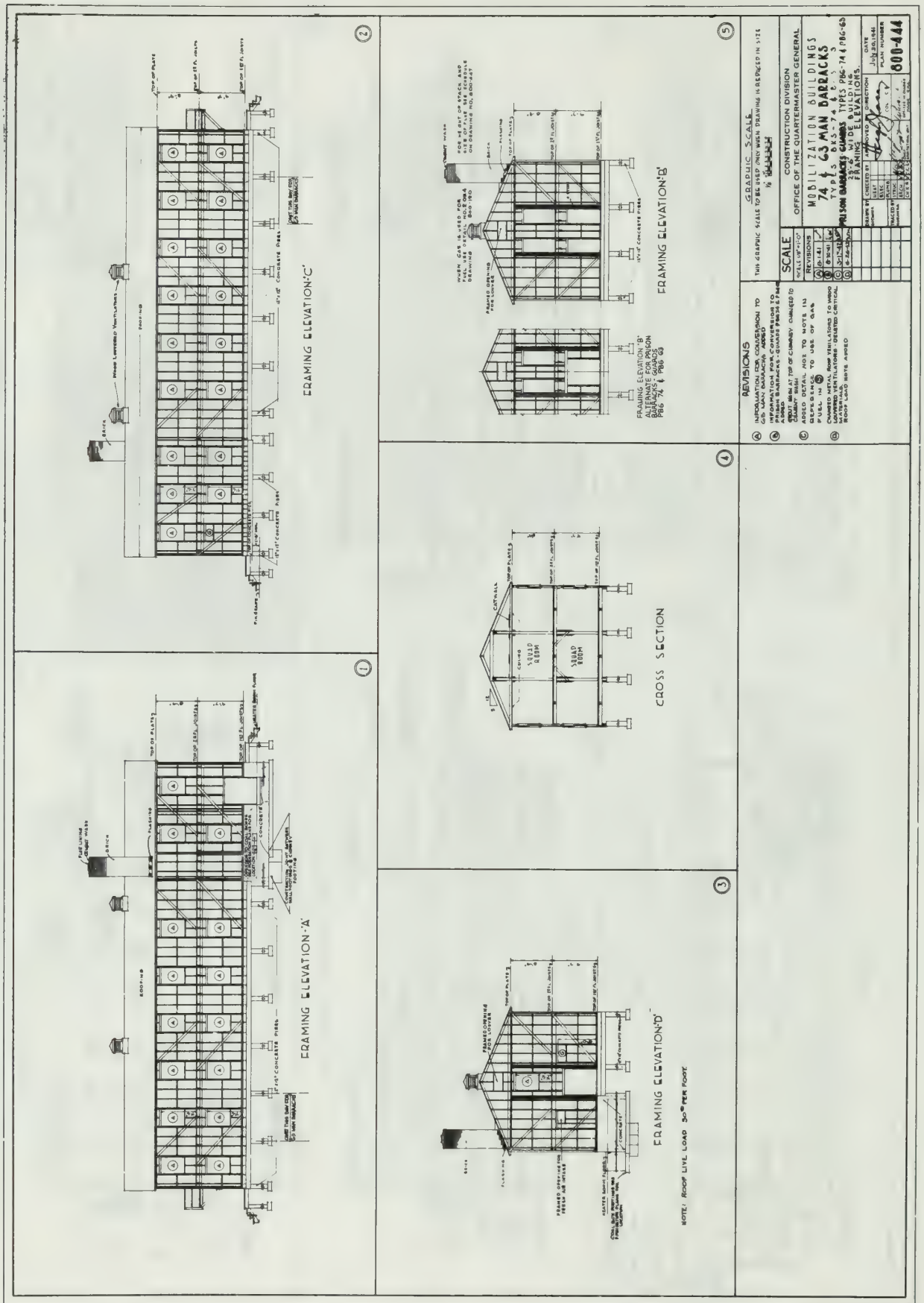
DRAWN BY	CHECKED BY	APPROVED BY DIRECTION	DATE
MARK EIPLEY			July 30, 1941

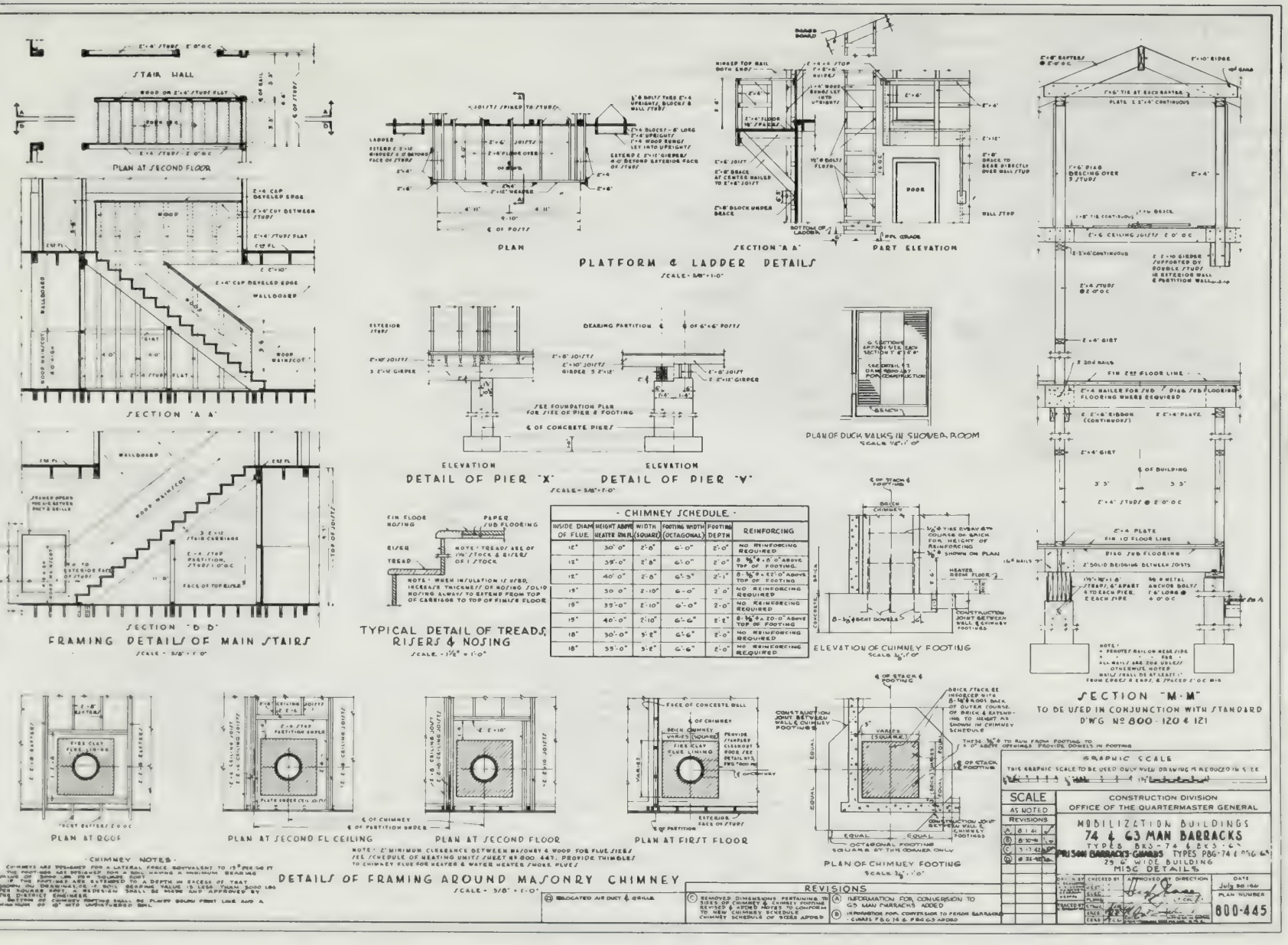
TRACED BY: MARK EIPLEY
APPROVED BY: CHIEF, ENGR. DIV. O.C.Q.M.

PLAN NUMBER 800-443

Plan Number 800-443

Plan Number 800-444





- CHIMNEY SCHEDULE -

INSIDE DIAM OF FLUE	HEIGHT ABOVE HEATER CEIL FL	WIDTH (SQUARE)	FOOTING WIDTH (OCTAGONAL)	FOOTING DEPTH	REINFORCING
12"	30'-0"	2'-0"	6'-0"	2'-0"	NO REINFORCING REQUIRED
12"	35'-0"	2'-8"	6'-0"	2'-0"	8 - 3/8" ø x 8'-0" ABOVE TOP OF FOOTING.
12"	40'-0"	2'-8"	6'-3"	2'-1"	8 - 3/8" ø x 12'-0" ABOVE TOP OF FOOTING.
15"	30'-0"	2'-10"	6'-0"	2'-0"	NO REINFORCING REQUIRED
15"	35'-0"	2'-10"	6'-0"	2'-0"	NO REINFORCING REQUIRED
15"	40'-0"	2'-10"	6'-6"	2'-2"	8 - 3/8" ø x 20'-0" ABOVE TOP OF FOOTING
18"	30'-0"	3'-2"	6'-6"	2'-0"	NO REINFORCING REQUIRED
18"	35'-0"	3'-2"	6'-6"	2'-0"	NO REINFORCING REQUIRED

· CHIMNEY NOTES ·

CHIMNEYS ARE DESIGNED FOR A LATERAL FORCE EQUIVALENT TO 15# PER SQ FT THE FOOTINGS ARE DESIGNED FOR A SOIL HAVING A MINIMUM BEARING VALUE OF 3000 LBS PER SQUARE FOOT IF THE FOOTINGS ARE EXTENDED TO A DEPTH IN EXCESS OF THAT SHOWN ON DRAWING, OR IF SOIL BEARING VALUE IS LESS THAN 3000 LBS PER SQUARE FOOT, A REDESIGN SHALL BE MADE AND APPROVED BY THE DISTRICT ENGINEER.
THE BOTTOM OF CHIMNEY FOOTING SHALL BE PLACED BELOW FROST LINE AND A MINIMUM OF 12" INTO UNDISTURBED EARTH.

NOTE: 2" MINIMUM CLEARANCE BETWEEN BRICK/MORTAR & WOOD FOR FLUE SIZES
SEE SCHEDULE OF HEATING UNITS SHEET Nº 800-441. PROVIDE THIMBLES TO CHIMNEY FLUE FOR HEATER & WATER HEATER SMOKE PIPES

REVISIONS

(C)	REMOVED DIMENSIONS PERTAINING TO SIZES OF CHIMNEY & CHIMNEY FOOTING REVISED & ADDED NOTES TO CONFORM TO NEW CHIMNEY SCHEDULE CHIMNEY SCHEDULE OF SIZES ADDED
(A)	INFORMATION FOR CONVERSION TO 63 MAN BARRACKS ADDED
(B)	INFORMATION FOR CONVERSION TO PRISON BARRACKS - CLASSES P&G 74 & P&G 63 ADDED
(D)	RELOCATED AIR DUCT & GRILLE

GRAPHIC SCALE
THIS GRAPHIC SCALE TO BE USED ONLY WHEN DRAWING IS REDUCED IN SIZE

SCALE AS NOTED

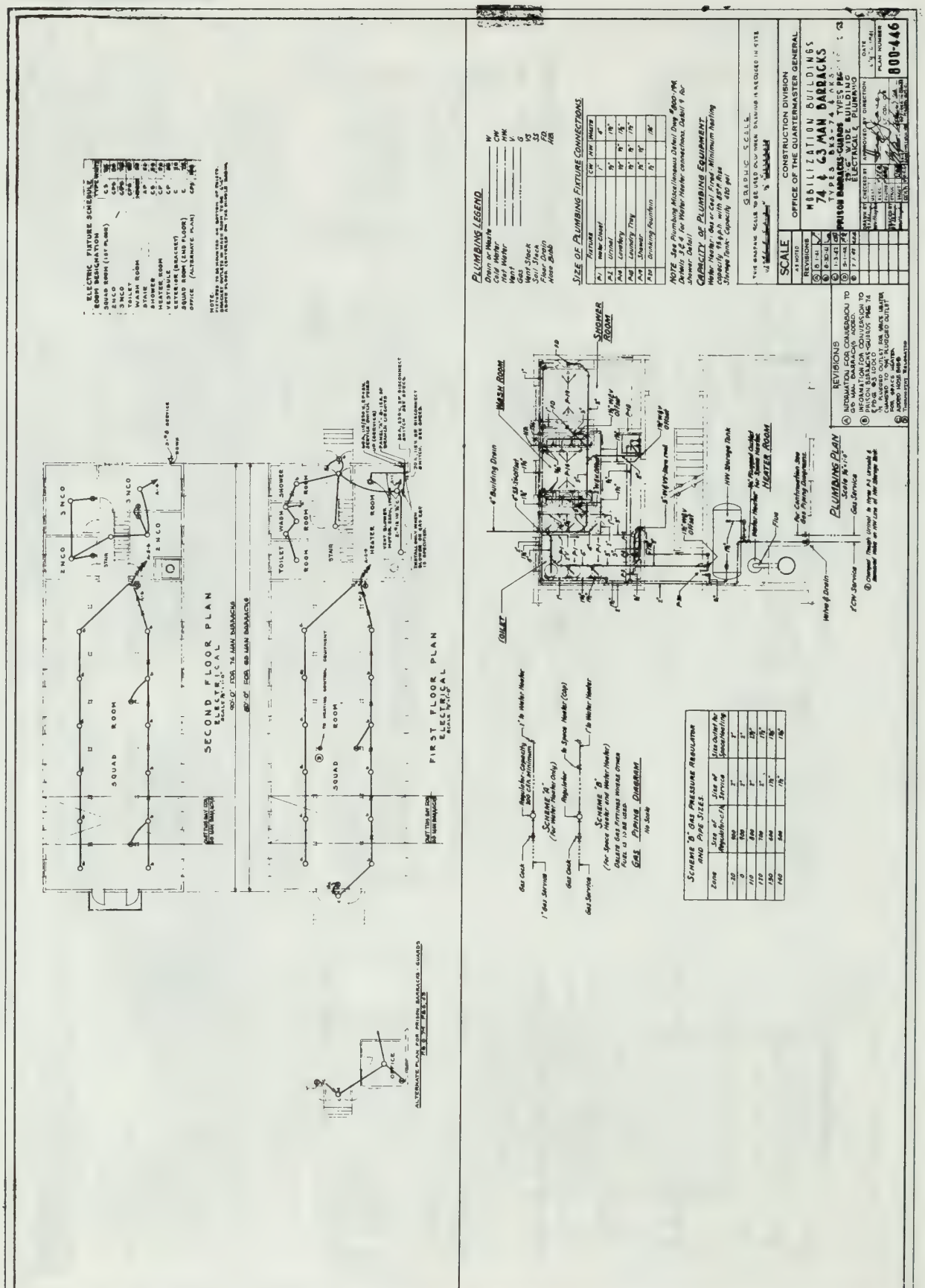
REVISIONS
(C) 8-16-61
(B) 8-10-61
(A) 5-17-61
(D) 6-26-61

CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL

MOBILIZATION BUILDINGS
74 & 63 MAN BARRACKS
TYPES BKS-74 & BKS-63
PRISON BARRACKS CLASSES TYPES P&G-74 & P&G-63
29'-6" WIDE BUILDING
MISC DETAILS

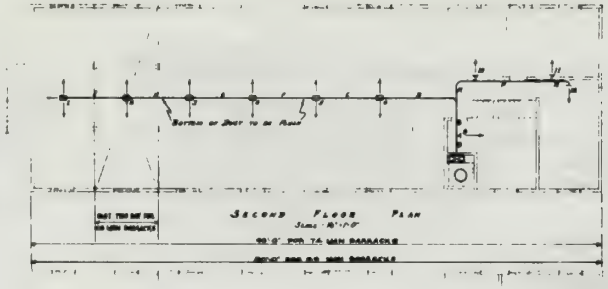
DESIGNED BY [illegible] CHECKED BY [illegible] APPROVED BY DIRECTION [illegible]
DRAWN BY [illegible] TRACED BY [illegible] CHECKED BY [illegible]
DATE July 30 1961
PLAN NUMBER 800-445

Plan Number 800-446

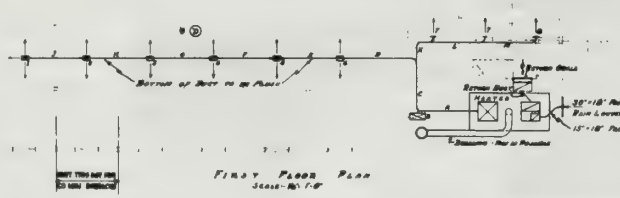


Duct Schedule

Room	-30°F	0°F	+10°F	+30°F	+50°F	+80°F
Symbol	Size	Size	Size	Size	Size	Size
A	28"×12"	26"×12"	24"×12"	22"×12"	20"×12"	20"×12"
B	22"×12"	20"×12"	20"×12"	20"×12"	20"×12"	18"×12"
C	22"×12"	20"×12"	22"×12"	20"×12"	17"×12"	14"×12"
D	17"×12"	22"×12"	20"×12"	17"×12"	12"×12"	14"×12"
E	17"×12"	22"×12"	22"×12"	17"×16"	12"×16"	10"×12"
F	14"×12"	17"×12"	15"×12"	14"×12"	11"×12"	10"×12"
G	12"×12"	12"×12"	12"×12"	11"×12"	11"×12"	8"×12"
H	12"×12"	12"×12"	11"×12"	11"×12"	11"×12"	8"×12"
J	12"×8"	12"×10"	12"×12"	12"×12"	12"×10"	8"×8"
K	10"×8"	10"×8"	10"×8"	10"×8"	8"×8"	6"×8"
L	8"×8"	8"×8"	8"×8"	8"×8"	8"×8"	6"×8"
M	8"×8"	8"×8"	8"×8"	8"×8"	8"×8"	6"×8"
N	8"×8"	8"×8"	8"×8"	8"×8"	8"×8"	8"×8"
P	8"×8"	8"×12"	8"×12"	8"×8"	12"×8"	8"×8"
R	8"×8"	8"×12"	8"×12"	8"×8"	8"×8"	8"×8"
Return	30"×18"	24"×24"	24"×24"	26"×18"	30"×24"	32"×24"
S	8"×8"	8"×8"	8"×8"	8"×8"	8"×8"	8"×8"



NOTE -
Ducts M and P Leaving A Shall Be Omitted in 63 Man Barracks.



74 Man Barracks Heater Schedule

Room	-30°F	0°F	+10°F	+30°F	+50°F	+80°F
Coal						
Min Cap - BTU/hr	402,000	402,000	402,000	402,000	336,000	268,000
Min Stack Dia	18"	18"	18"	18"	18"	18"
Min Fan Cap - CFM	3320	3000	2680	2000	2420	1840
Min Ext Static Press - In H2O	3/4	3/4	3/4	3/4	3/4	3/4
Prison Bks - CFM	1520	1400	1240	1000	1120	860
Min Stack Dia (Gas)	12	12	12	12	10	10
Min Cap - BTU/hr	636,000	636,000	636,000	636,000	530,000	424,000
Gas						
Gas Burners	2	2	2	2	1	1

Stack Heights - Above Heater Room Floor

Bituminous Coal
Anthracite Coal - With Blower
Gas

3'-0" Above Roof Flash

See Drawing No 800-196 for all Heating Drawings

63 Man Barracks Heater Schedule

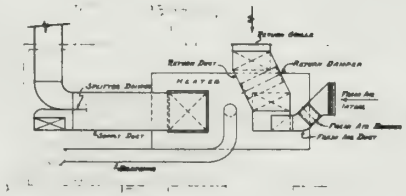
Room	-30°F	0°F	+10°F	+30°F	+50°F	+80°F
Coal						
Min Cap - BTU/hr	336,000	336,000	336,000	336,000	280,000	224,000
Min Stack Dia	18"	18"	18"	18"	18"	18"
Min Fan Cap - CFM	2810	2640	2470	2160	2020	1760
Min Ext Static Press - In H2O	3/4	3/4	3/4	3/4	3/4	3/4
Prison Bks - CFM	1280	1120	1040	1000	1010	880
Min Stack Dia (Gas)	12	12	12	12	10	10
Min Cap - BTU/hr	466,368	466,368	377,280	369,264	349,888	182,880
Gas						
Gas Burners	2	2	2	2	1	1

Plaque and Duct Opening Schedule

Room	Symbol	Plaque Size Less Wire Frame	Duct Opening	C.F.M. Duct Plaque
-30°F	1	12"×8"×0"	10"×8"	870
	2	8"×8"×0"	7"×8"	580
	3	8"×8"×0"	7"×8"	580
	4	8"×8"×0"	7"×8"	580
	5	8"×8"×0"	7"×8"	580
	6	8"×8"×0"	7"×8"	580
0°F	1	12"×8"×0"	10"×8"	660
	2	8"×8"×0"	8"×8"	440
	3	8"×8"×0"	8"×8"	440
	4	8"×8"×0"	8"×8"	440
	5	8"×8"×0"	8"×8"	440
	6	8"×8"×0"	8"×8"	440
+10°F	1	12"×8"×0"	10"×8"	660
	2	10"×8"×0"	8"×8"	440
	3	8"×8"×0"	8"×8"	440
	4	8"×8"×0"	8"×8"	440
	5	8"×8"×0"	8"×8"	440
	6	8"×8"×0"	8"×8"	440
+30°F	1	12"×8"×0"	10"×8"	330
	2	8"×8"×0"	7"×8"	170
	3	8"×8"×0"	7"×8"	170
	4	8"×8"×0"	7"×8"	170
	5	8"×8"×0"	7"×8"	170
	6	8"×8"×0"	7"×8"	170
+50°F	1	8"×8"×0"	6"×8"	220
	2	8"×8"×0"	6"×8"	130
	3	8"×8"×0"	7"×8"	130
	4	8"×8"×0"	7"×8"	130
	5	8"×8"×0"	7"×8"	130
	6	8"×8"×0"	7"×8"	130
+80°F	1	8"×8"×0"	8"×8"	220
	2	8"×8"×0"	7"×8"	110
	3	8"×8"×0"	7"×8"	110
	4	8"×8"×0"	7"×8"	110
	5	8"×8"×0"	7"×8"	110
	6	8"×8"×0"	7"×8"	110

Grille Schedule

Room	-30°F		0°F		+10°F		+30°F		+50°F		+80°F	
Symbol	Size	CFM	Size	CFM	Size	CFM	Size	CFM	Size	CFM	Size	CFM
7	16"×8"	100	16"×8"	80	16"×8"	73	16"×8"	60	16"×8"	55	16"×8"	45
8	16"×8"	100	16"×8"	100	12"×8"	110	16"×8"	90	12"×8"	80	16"×8"	60
9	12"×8"	80	12"×8"	100	16"×8"	90	12"×8"	70	16"×8"	60	12"×8"	50
10	12"×8"	70	12"×8"	80	12"×8"	80	16"×8"	60	12"×8"	60	12"×8"	40
11	16"×8"	150	16"×8"	150	16"×8"	170	16"×8"	100	16"×8"	130	16"×8"	90
12	16"×8"	170	20"×8"	210	24"×8"	230	16"×8"	160	16"×8"	190	12"×8"	110
Return	36"×24"	3320	36"×24"	3320	36"×24"	3320	24"×24"	3000	24"×24"	2820	24"×24"	2080
13	20"×8"	200	25"×8"	225	22"×8"	238	16"×8"	180	16"×8"	160	12"×8"	120
14	16"×8"	30	16"×8"	60	16"×8"	60	16"×8"	60	16"×8"	60	12"×8"	55
15	16"×8"	120	16"×8"	100	16"×8"	100	16"×8"	110	16"×8"	90	12"×8"	70



(E) Ducts Shall Be Constructed of a Suitable Non-Metallic Material.

Above Grille Sizes are for 100% Free Area. For Grilles Having Less Free Area, Increase Nominal Dimension Accordingly.

Above C.F.M. for Return Grilles Apply to 74 Man Barracks Only.

Revisions

- (A) Information for Conversion to 63 Man Barracks Added
- (B) Alternate for Conversion to PBG 74 and PBG 63
- (C) Added Stack Dia.(Gas) to Heater Schedules for 63 Man & 74 Man Barracks
- (D) Thermostat Regulated
- (E) Return Duct and Grille Resized and Relocated. Note Added. Resized Stack Diameters (Gas).

Graphic Scale

Typographic scale to be used only when drawing is reduced to size of

SCALE
As Noted

Revisions		
(A)	8-11-41	
(B)	9-30-41	
(C)	3-17-42	
(D)	5-1-42	
(E)	6-12-42	

Construction Division
Office of the Quartermaster General

MOBILIZATION BUILDINGS
74 & 63 MAN BARRACKS
TYPES BKS-74 & BKS-63
PRISON BARRACKS GUARDS TYPES PBG 74 & PBG 63
28'-0" WIDE BUILDING
HEATING

Drawn By [illegible] Checked By [illegible]

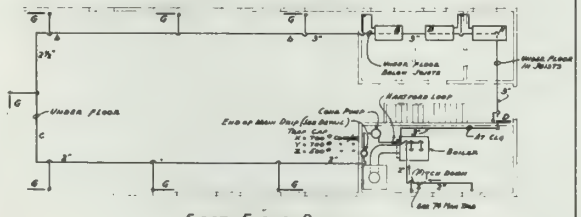
Approved By Direction [signature]

Date 1-14-41

Tracer [illegible]

Plan Number 800-447

SECOND FLOOR PLAN
SCALE 1/8" = 1'-0"



FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"

RADIATOR SCHEDULE (63 MAN BKS.)				
SYMBOL	TYPE	SQ. FT. RADIATION ZONE X	ZONE Y	ZONE Z
A	47-26"H	33	33	24 3/4
B	W.R.-11 1/2 SPC.	44	33	22
C	47-38"H.	41 1/2	41 1/2	27 1/2
D	" - 38"H.	42 1/2	34	25 1/2
E	57-26"H	66 1/2	70	49
F	" "	73 1/2	77	56
G	" "	70	70	52 1/2
H	W.R.-11 1/2 SPC.	55	44	33
J				
K				
L				
M				
N				
O				
P				
Q				
R				
TOTAL C.I. RADN.		1379 1/2	1268 1/2	994 1/2

NOTE: RADIATORS "B" & "H" SHALL BE INSTALLED AT 1ST FLOOR CEILING, PITCHED DOWN TOWARD CONNECTION, AND PROVIDED WITH ECCENTRIC BUSHING AT CONNECTION.

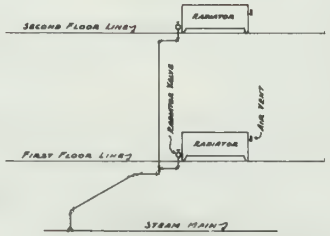
SINGLE CONDENSATE PUMP & RECEIVER (63 MAN BKS.)			
	ZONE X	ZONE Y	ZONE Z
MIN. PUMP CAP. G.P.M.	3	3	1 1/2
DISCHARGE PRESS., LBS./SQ.IN. GA.	20	20	20
RECEIVER STORAGE CAP. GALS.	10	10	6

NOTE: CONDEN ATE PUMP SHALL BE PITTED WHERE NECESSARY

BOILER SCHEDULE (63 MAN BKS.)			
TYPE OF BOILER	ZONE X	ZONE Y	ZONE Z
C.I. (EXCEPT GAS FIRED) 36 FT. STANDING STM. RADN.	1380	1350	995
C.I. GAS FIRED, 36 FT. STM. A.G.A. OUTPUT RATING	2280	2240	1580
STEEL, HAND FIRED, 36 FT. STM. S.H.B.I. RATING	1800	1800	1300
STEEL, MECH. FIRED, 36 FT. STM. S.H.B.I. RATING	1800	1800	1300

NOTE: CAST IRON BOILERS, EXCEPT GAS FIRED, SHALL BE SELECTED ON THE BASIS OF HEATING, PIPING & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION "NET LOAD" RATINGS.

63 MAN BARRACKS



TYPICAL RADIATOR CONNECTION
NOT TO SCALE

ZONE SYMBOLS	
ZONE	TEMP. °F.
X	-20
Y	0
Z	+20

RADIATOR CONNECTION SCHEDULE		
PIPE SIZE (STEAM)	UPSIZED SUPPLY & RISERS	UPSIZED TO BE USED ONLY WHERE SUPPLY RISERS ARE VERTICAL CONNECTIONS
3/4	1"	—
1	1 1/4"	1"
1 1/4	1 1/2"	1 1/4"
1 1/2	2"	1 1/2"
2	2 1/2"	2"

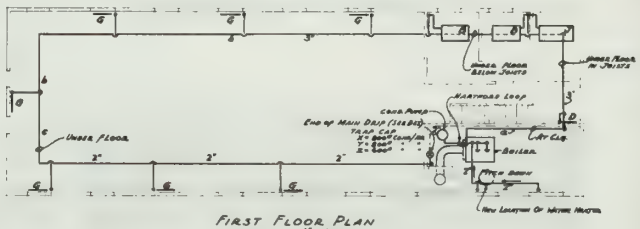
CHIMNEY SCHEDULE				
DIMENSION	FUEL	ZONE X	ZONE Y	ZONE Z
MIN. DIA. OF CHIMNEY	COAL	15"	15"	12"
	GAS	10"	10"	10" Ⓐ
HT. ABOVE BOILER RM. FL.	BITUMINOUS COAL	40'	40'	40'
	ANTHRACITE & COKE WITH BLOWER	35'	35'	35'
	GAS	3' ABOVE HIGH PT. OF ROOF		

SUPPLY MAIN PIPE SIZES				
	SYMBOL	ZONE X	ZONE Y	ZONE Z
SUPPLY MAIN	a	4"	4"	3"
	b	3"	3"	2 1/2"
	c	2 1/2"	2 1/2"	2"
	d			
	e			
	f			

NOTES:
UNLESS OTHERWISE INDICATED, ALL STEAM AND RETURN MAINS, EXCEPT THOSE IN BOILER ROOM, SHALL BE RUN BELOW FIRST FLOOR.
FOR ALL DETAILS NOT SHOWN, SEE STRS. 3RD AND 4TH-182

TYPICAL
FOR
63 & 74 MAN BKS.

SECOND FLOOR PLAN
SCALE 1/8" = 1'-0"



FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"

SINGLE CONDENSATE PUMP & RECEIVER (74 MAN BKS.)			
	ZONE X	ZONE Y	ZONE Z
MIN PUMP CAP. G.P.M.	3	3	3
DISCHARGE PRESS., LBS./SQ.IN. GA	20	20	20
RECEIVER STORAGE CAP. GALS.	10	10	10

NOTE: CONDENSATE PUMP SHALL BE PITTED WHERE NECESSARY.

BOILER SCHEDULE (74 MAN BKS.)			
TYPE OF BOILER	ZONE X	ZONE Y	ZONE Z
C.I. (EXCEPT GAS FIRED) 36 FT. STANDING STM. RADN.	1695	1600	1150
C.I. GAS FIRED, 36 FT STM. AGA OUTPUT RATING	2700	2650	1880
STEEL, HAND FIRED, 36 FT STM. S.H.B.I. RATING	2300	2300	1670
STEEL, MECH. FIRED, 36 FT STM. S.H.B.I. RATING	2190	2190	1670

NOTE: CAST IRON BOILERS, EXCEPT GAS FIRED, SHALL BE SELECTED ON THE BASIS OF HEATING, PIPING & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION "NET LOAD" RATINGS.

RADIATOR SCHEDULE (74 MAN BKS.)				
SYMBOL	TYPE	SQ. FT. RADIATION ZONE X	ZONE Y	ZONE Z
A	47-26"H	33	33	24 3/4
B	W.R.-11 1/2 SPC.	44	33	22
C	47-26"H	41 1/2	41 1/2	27 1/2
D	" - 38"H	42 1/2	34	25 1/2
E	57-26"H	66 1/2	70	49
F	" "	73 1/2	77	56
Q	67- "	84	84	60
H	" "	92	92	64
J	W.R.-11 1/2 SPC.	33	44	33
K				
L				
M				
N				
O				
P				
Q				
R				
TOTAL C.I. RADN.		163 1/2	1597 1/2	1127 1/2

NOTE: RADIATORS "B" & "J" SHALL BE INSTALLED AT 1ST FLOOR CEILING, PITCHED DOWN TOWARD CONNECTION, AND PROVIDED WITH ECCENTRIC BUSHING AT CONNECTIONS.

74 MAN BARRACKS

REVISIONS
Ⓐ RESIZED STACK DIAMETERS (GAS).

GRAPHIC SCALE
THIS GRAPHIC SCALE TO BE USED ONLY WHEN DRAWINGS ARE REDUCED IN SIZE.

CHECKED
ARCH.
STRUCT.
ELECT.
PLB.
HEAT.
CIVIL ENGR.
CONTR.

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ENGINEERS - CONSTRUCTION DIVISION
WASHINGTON, D. C.

MOBILIZATION BUILDINGS
74 & 63 MAN BARRACKS
TYPES BKS.-74 & BKS.-63
PRISON BARRACKS - GUARDS TYPES 700-744 T&E-875
744-B WITH BASEMENT
ALTERNATE LAYOUT FOR STEAM HEATING SYSTEM
SHEET OF SHEETS — SCALE 1/8" = 1'-0"

SUBMITTED — APPROVAL RECOMMENDED — APPROVED

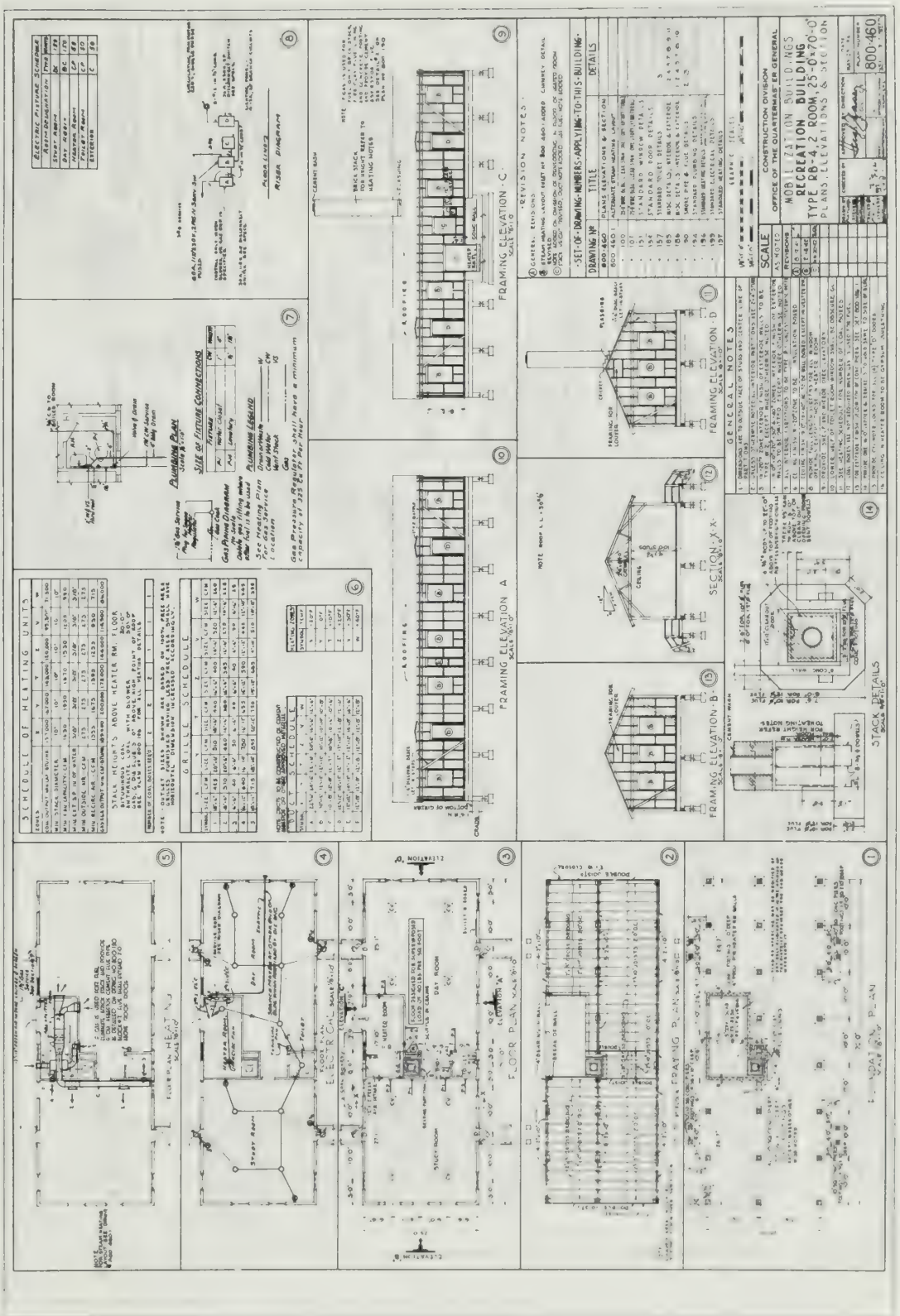
BRANCH — CHIEF OF ENGINEERS — DIVISION ENGINEER

DRAWN — TRACED — DATE — DISTRICT
M.D. — CHECKED — MARCH 17, 1941 — CONSTRUCTION FILE NO.

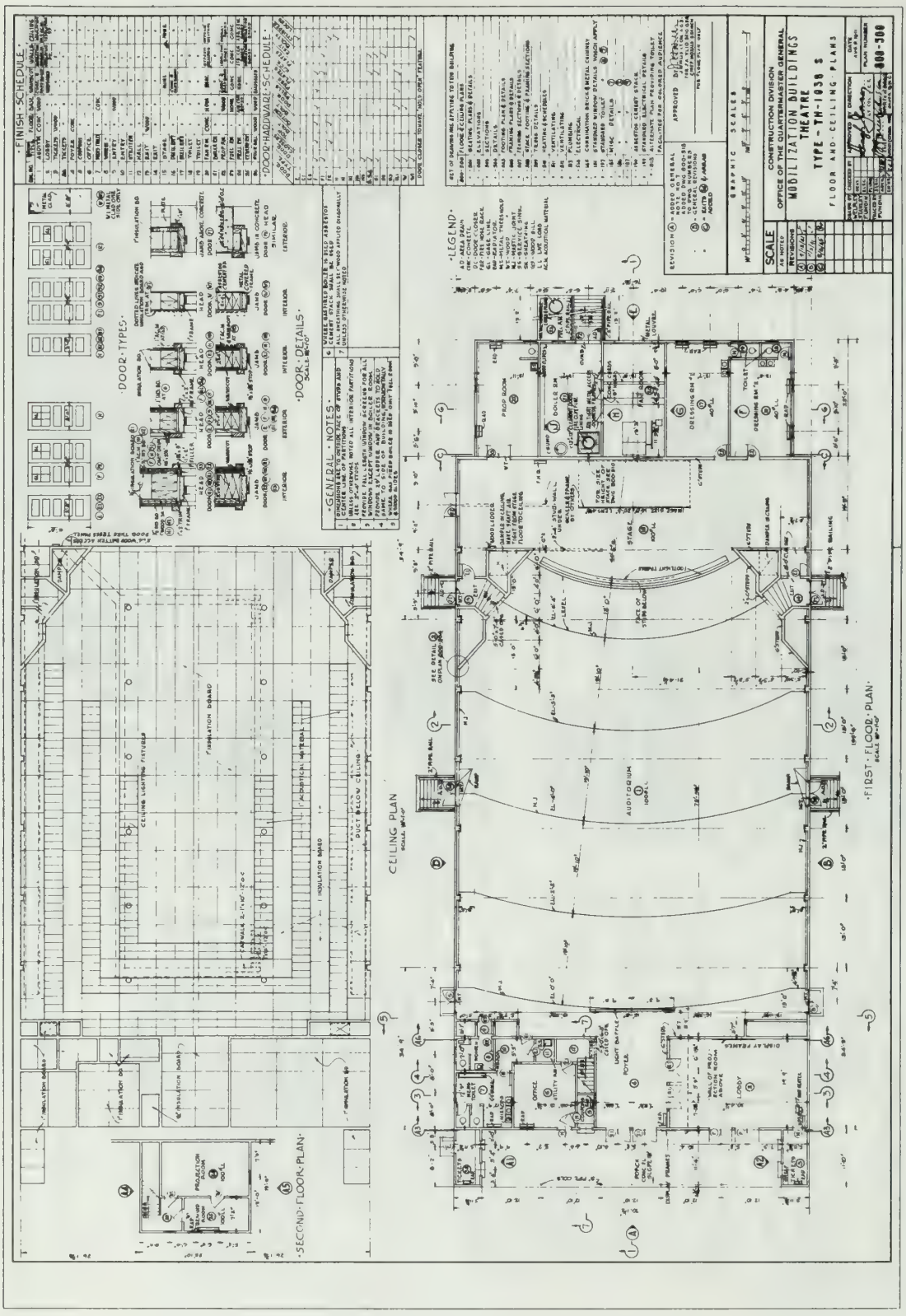
APPROVED FOR — DATE

DRAWING NUMBER
800-447.1

Plan Number 800-460

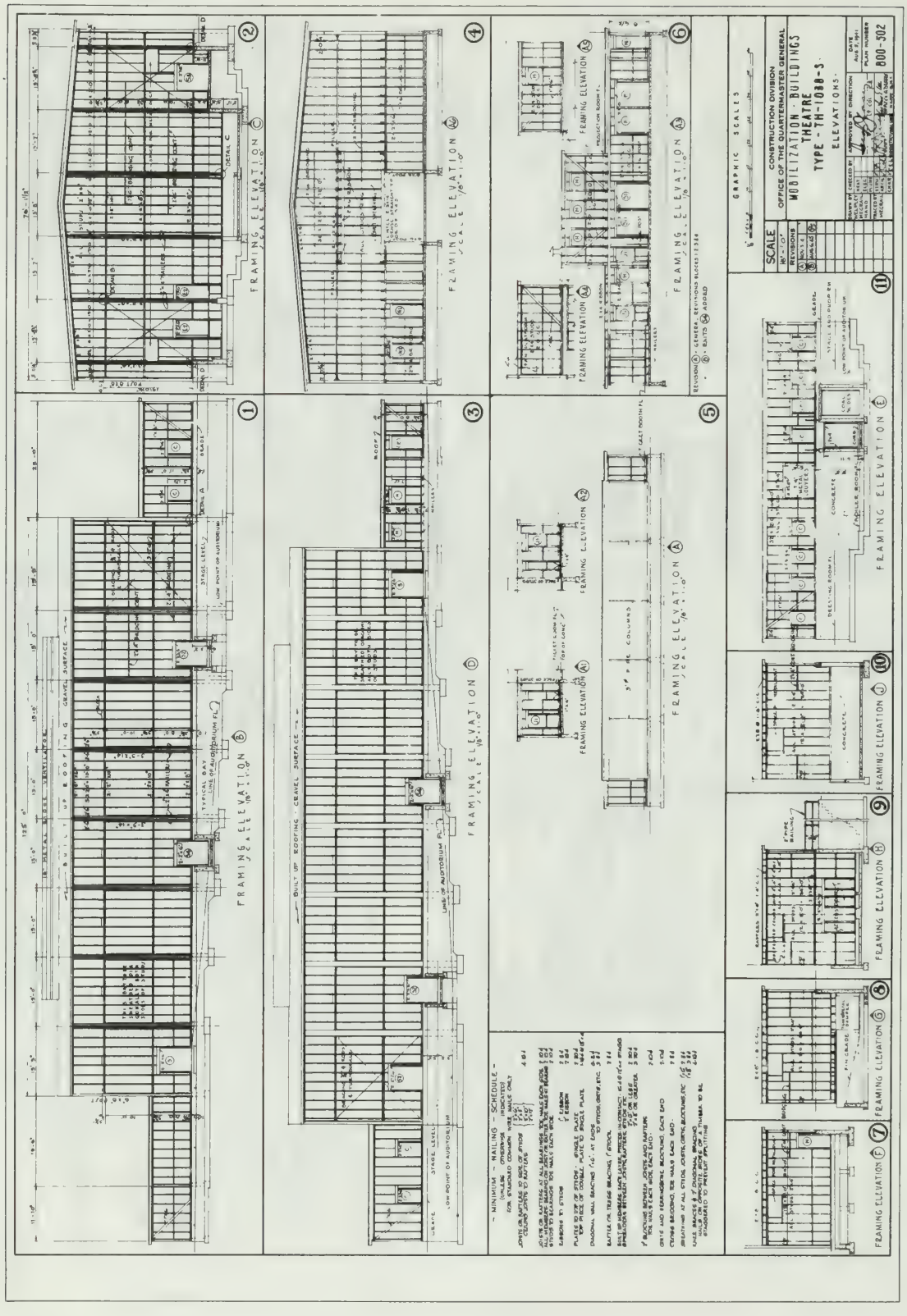


Plan Number 800-500

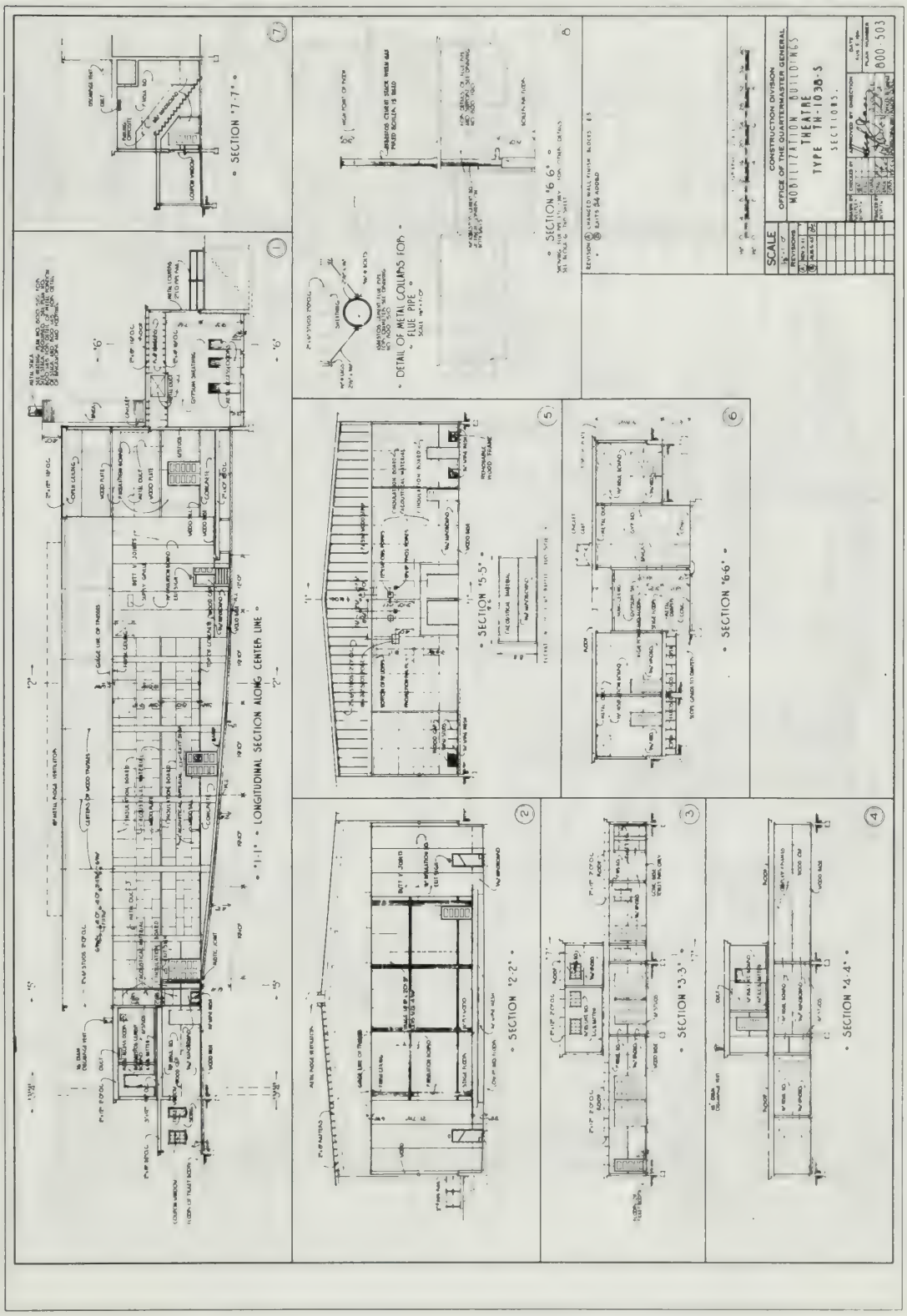


Plan Number 800-501

Plan Number 800-502



Plan Number 800-503



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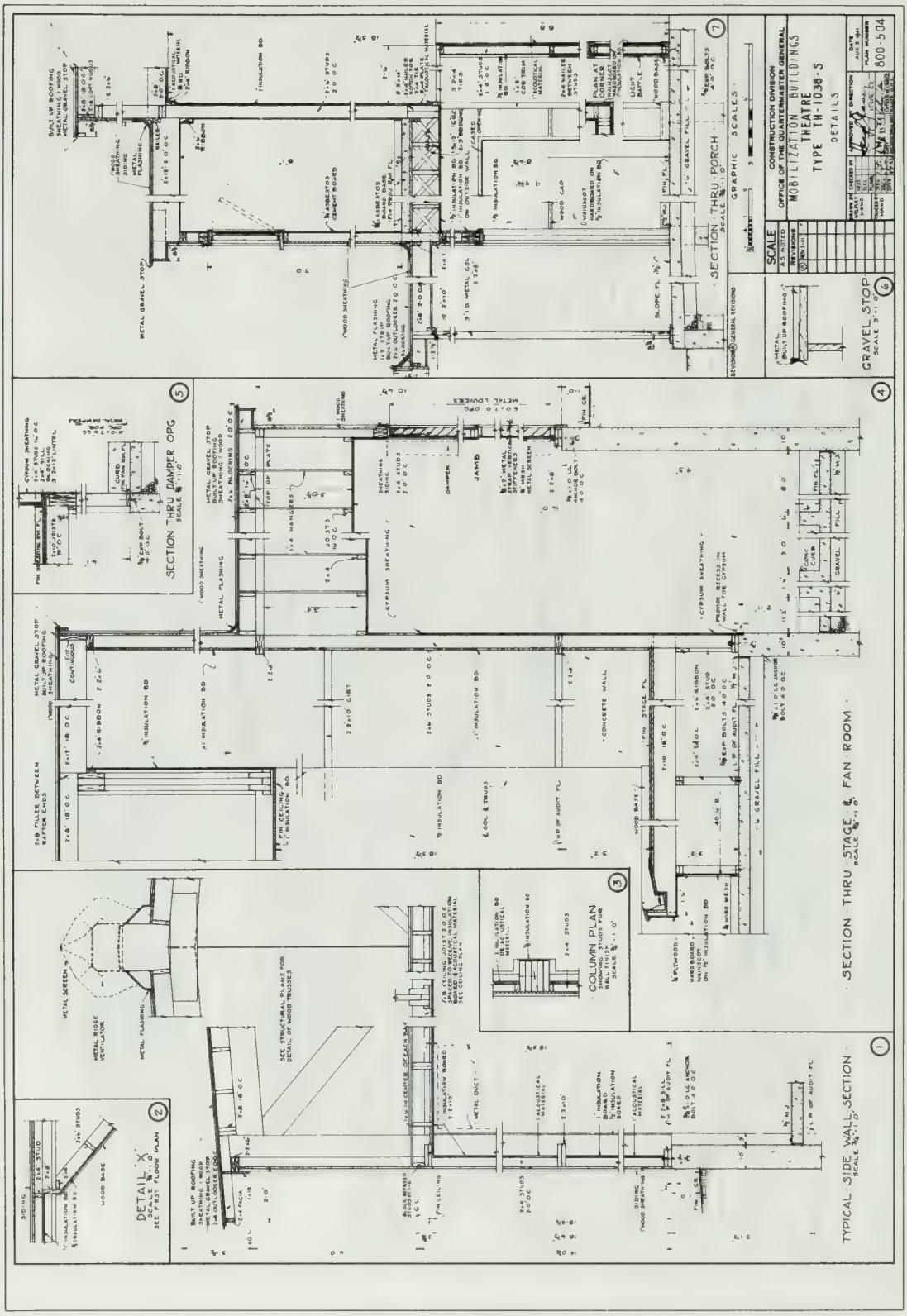
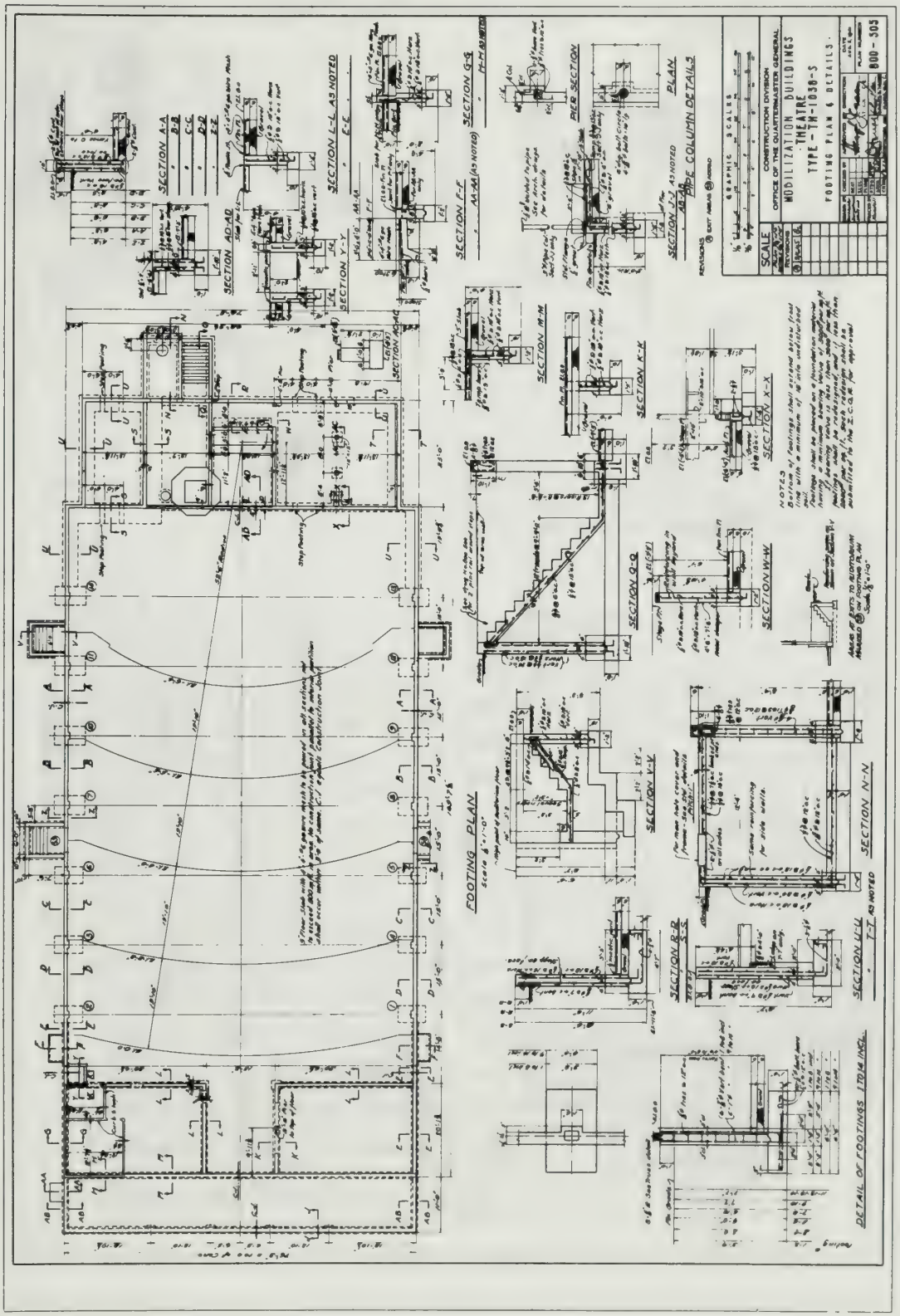
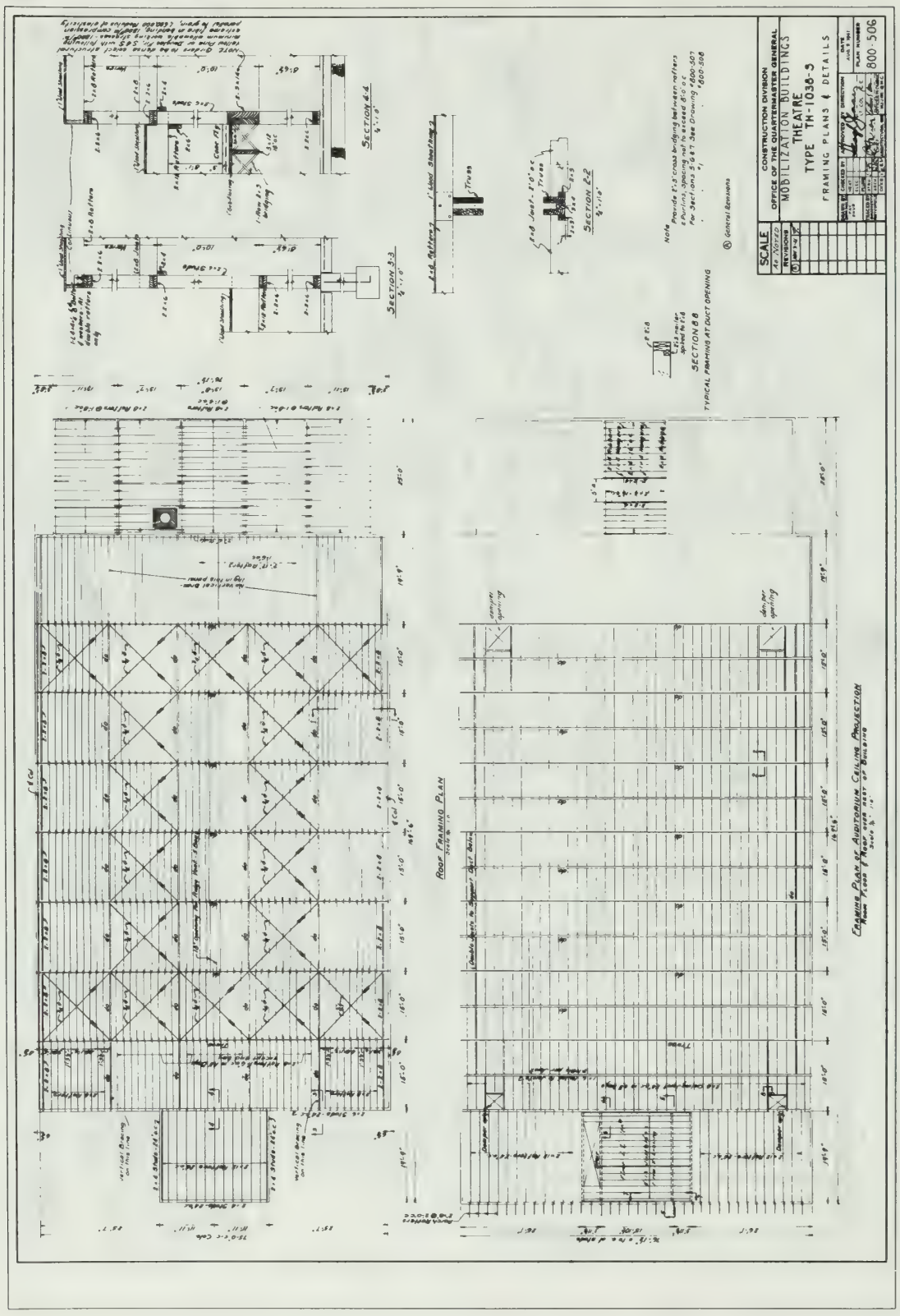


Plan Number 800-505



Plan Number 800-506



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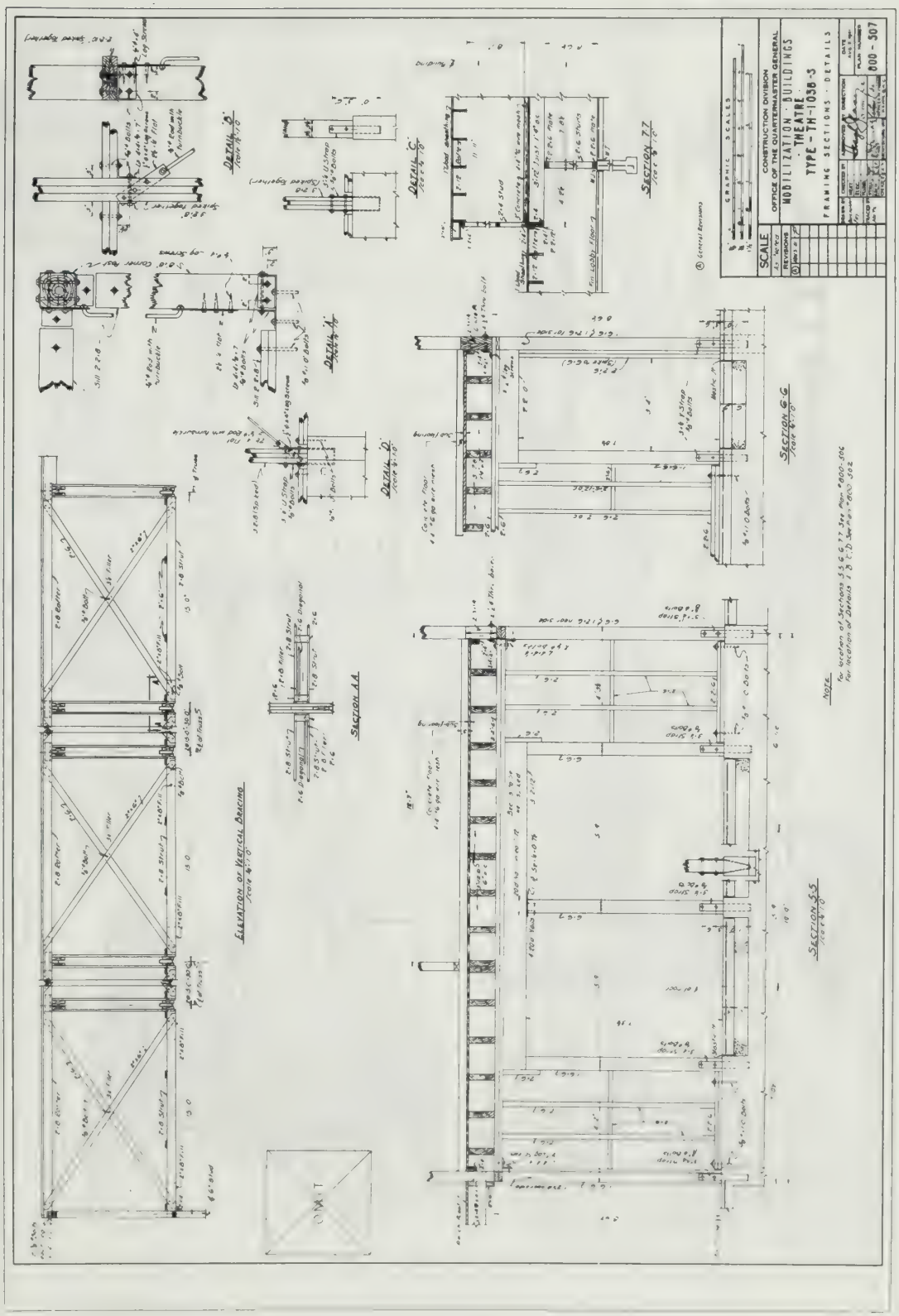

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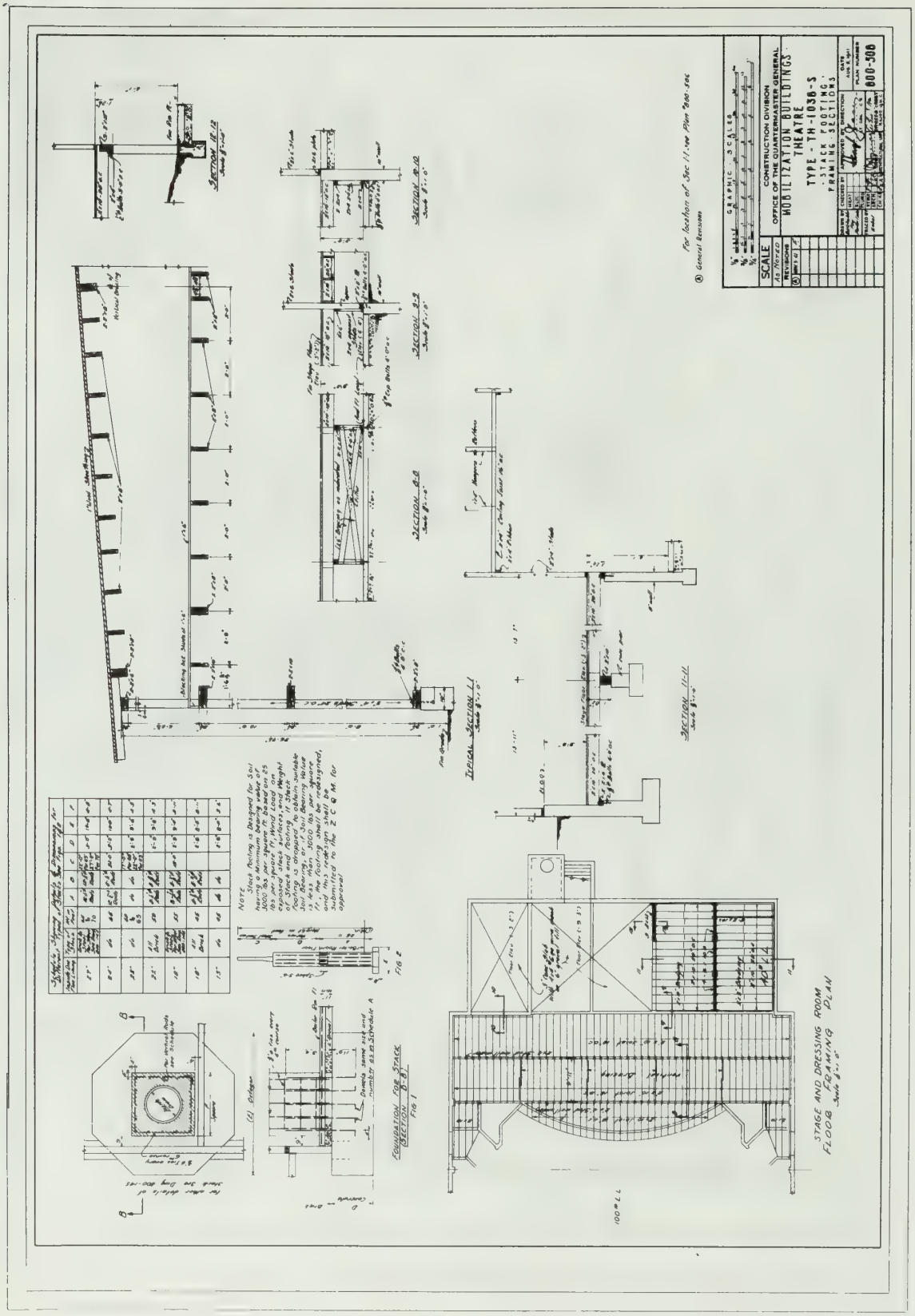
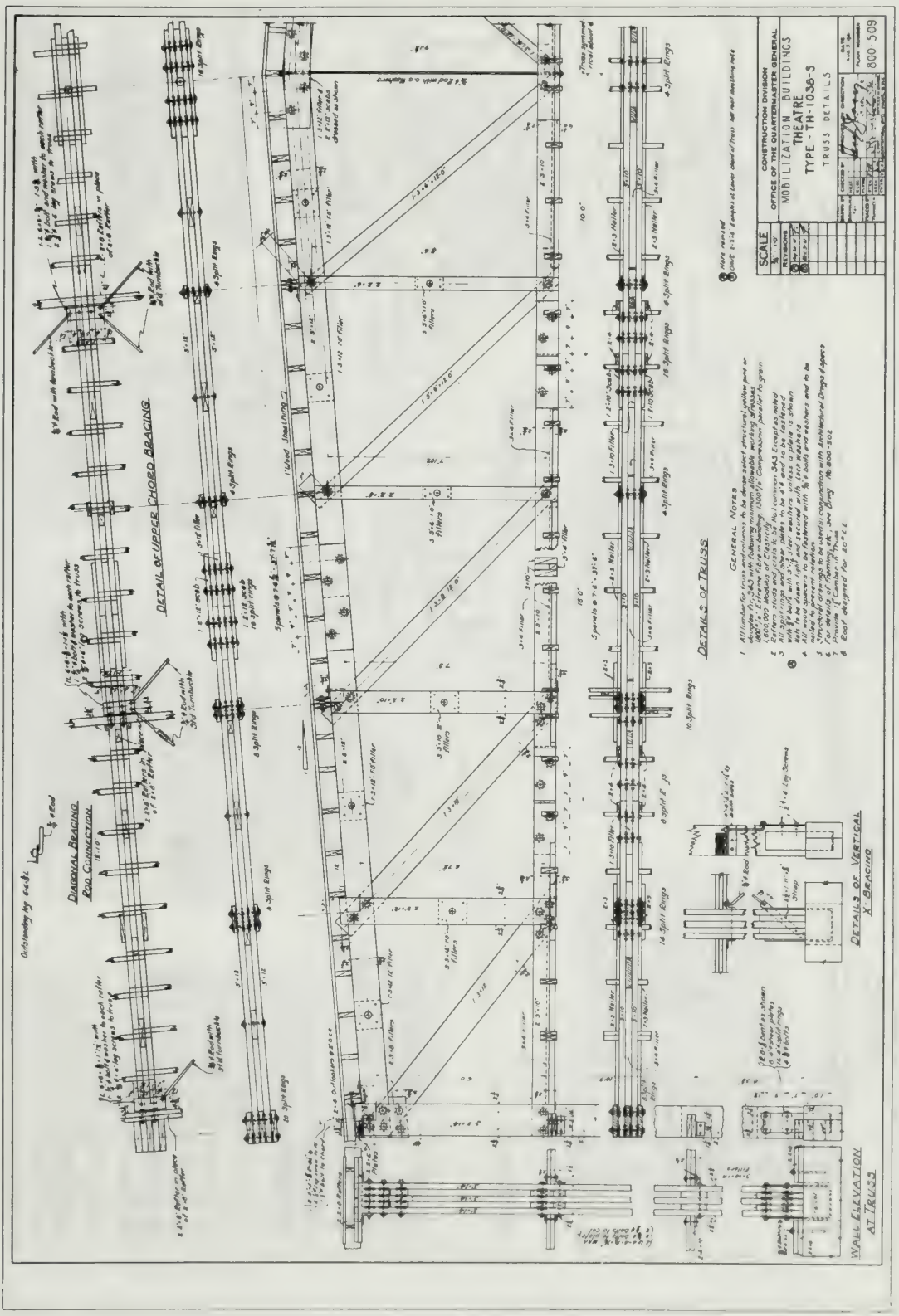


Plan Number 800-509



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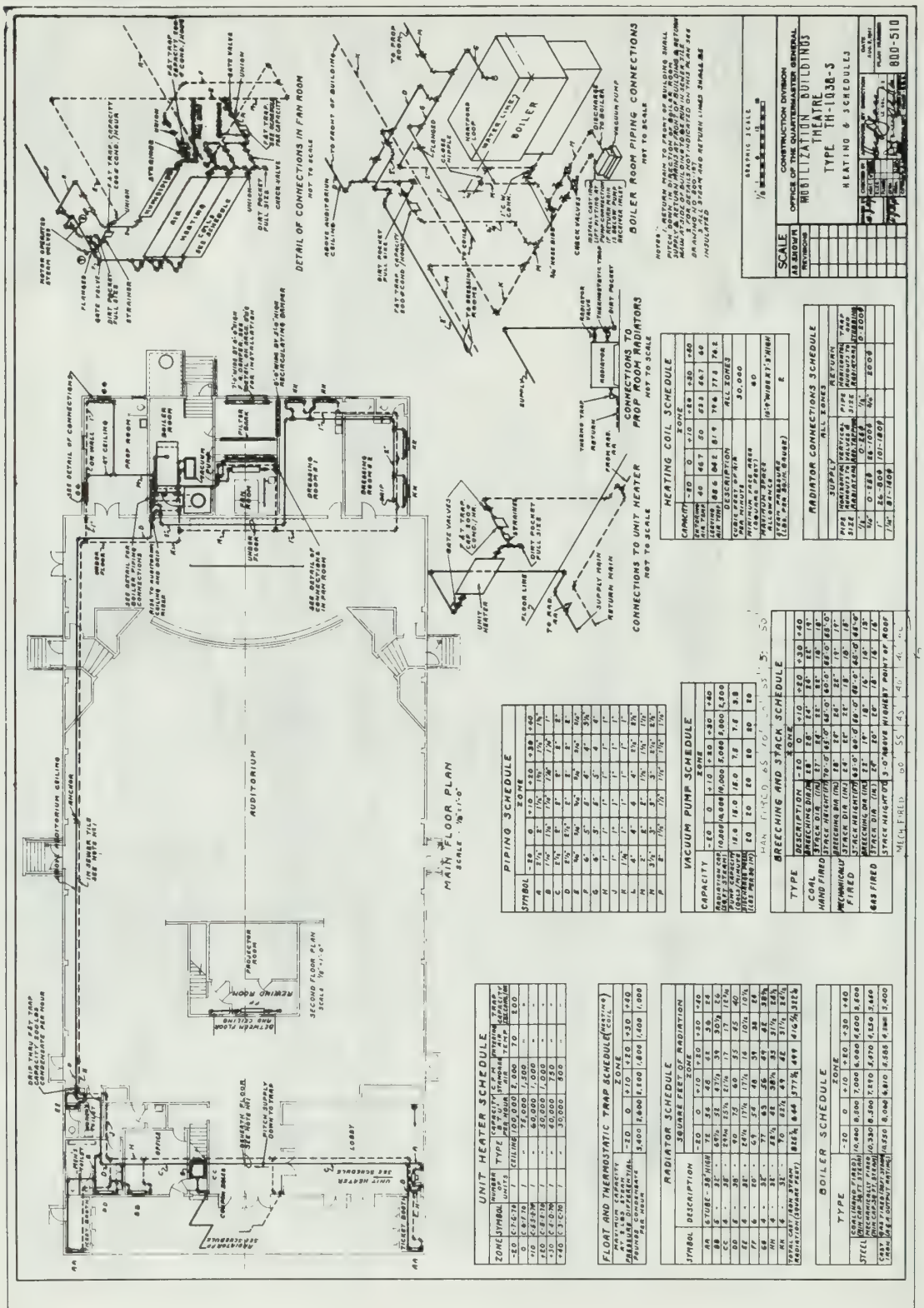
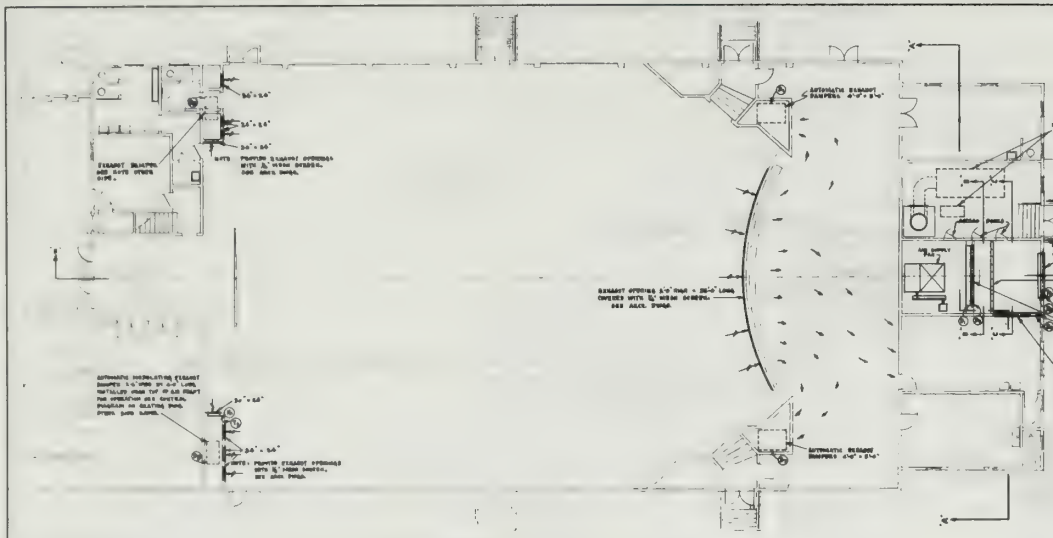
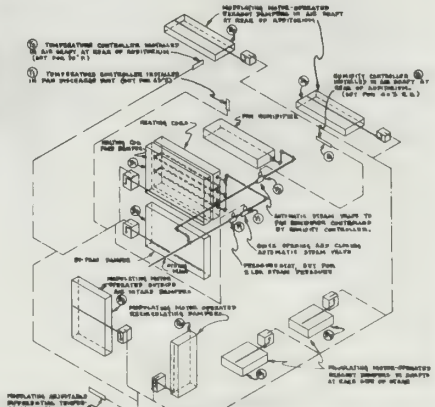




LOWER AUDITORIUM PLAN

SCALE - 1/4" = 1'-0"

FAN SCHEDULE						
USE	CAPACITY (C.F.M.)	STATIC PRESS. IN INCHES OF WATER	TYPE	FULL OUTLET VELOCITY (F.P.M.)	MAX. SOUND POWER LEVEL (DECIBELS)	MIN. SIZE "A"
PROJECTION BOOTH EXHAUST	1,500	3/8	DOUBLE INLET-CENTRIFUGAL HOUSING - CENTER DISCHARGE OUTLET	1,000	18"	1/2
AUDITORIUM AIR SUPPLY	20,000	1"	DOUBLE INLET-CENTRIFUGAL HOUSING - CENTER DISCHARGE OUTLET	1,900	48"	2



AUTOMATIC CONTROL SYSTEM

DESCRIPTION OF OPERATION

1. HEATING - Either (T) or (T) thermostats shall control the modulating damper motors. When by-pass dampers is fully open, the coil face dampers shall be fully closed and vice versa. When (T) or (T) call for heat and pressurestat is satisfied the steam valve opens, the by-pass dampers close and the coil face dampers open. The steam valve remains open until the dampers is fully closed. A switch on the damper motor shall operate the steam valve. The pressurestat shall not allow the steam valve and face dampers to open until there is a steam pressure of 5 lbs. in the supply line. Practically no air shall pass through the coils until they are full of steam under pressure.

2. VENTILATION - The minimum damper setting switch shall be adjusted so that the dampers are positioned for minimum setting (when ventilation is called for by the space humidi-stat in the auditor) at outside temperatures corresponding to the specified heating zone. The minimum positions shall be as follows - outside air intake, 10,000 C.F.M.; Recirculating air dampers, 20,000 C.F.M. Two exhaust dampers in air shafts at rear of auditorium, 8000 C.F.M. (each) and exhaust dampers in air shafts near fan room (when fully closed). The fan discharge temperature controller will control the heating damper and by-pass damper to maintain a discharge air temperature of not less than 65°F. The outdoor adjustable differential thermostats controllers shall operate the outdoor air dampers and all connected dampers to admit over-heating in the auditorium when there is a increase in the heat loss. This controller shall be adjusted to gradually open the outdoor air dampers, fan room exhaust dampers, and close the recirculating dampers on a rise in outdoor air temperature, and to return to the minimum position at whatever outdoor air will provide a discharge air temperature of 65°F with the minimum quantity being positive. In case of fan failure and temperature does not increase as outdoor conditions rise the outdoor air damper will by pass to a minimum opening (all other dampers taking adjusted positions) as set by the minimum positon switch. If the auditorium temperature could drop due to the temperature of the discharge air provided, the return air controller shall admit this change and this changes of the outdoor air damper away from the outdoor air temperature controller and expect it to the minimum positon switch.

OPERATING INSTRUCTIONS - WARMING UP

A. A switch with indicating plate and small eye shall be installed in the office near the fan positioning. This switch shall control the system as follows: (A) Light off (manual operating), the outside air dampers and exhaust dampers shall be fully closed and the recirculating air dampers fully open. Fans and by-pass dampers shall operate automatically with steam valve to maintain the set 70°F temperatures, (B) Light on (automatic operation), the system shall operate completely automatically, and the person and recirculating air, and exhaust air dampers shall take their positions as mentioned above described.

4. CLOSING DOWN - About 5 minutes before closing down, the manual-automatic switch shall be thrown to the manual position, closing all outside air dampers and the fan stopped at closing. All ventilating dampers shall remain in this position until changed by throwing the switch to automatic position.

5. HUMIDITY - The humidity controller shall control the steam valve to the fan humidifier.

6. The entire control system (heating, ventilating and humidifying) shall be put into operating with the starting of the main supply fan, and de-energized with the stopping of this fan.

7. The minimum damper setting switch and all relays shall be installed on finished panel is finished box with hinged locking door in fan room. All items of equipment shall be clearly marked with permanent name plates, using designations corresponding to the designations on the framed wiring diagram and operating instructions to be installed by this contractor in fan room.

8. Face and by-pass dampers shall modulate to maintain the proper temperatures without cycling and within a one degree differential (½° above and ½° below the 70° inside temperature).

DIAGRAMMATIC DETAIL
OF CONTROLS FOR HEATING-VENTILATING-HUMIDIFYING SYSTEM
NOT TO SCALE

GRAPHIC SCALE

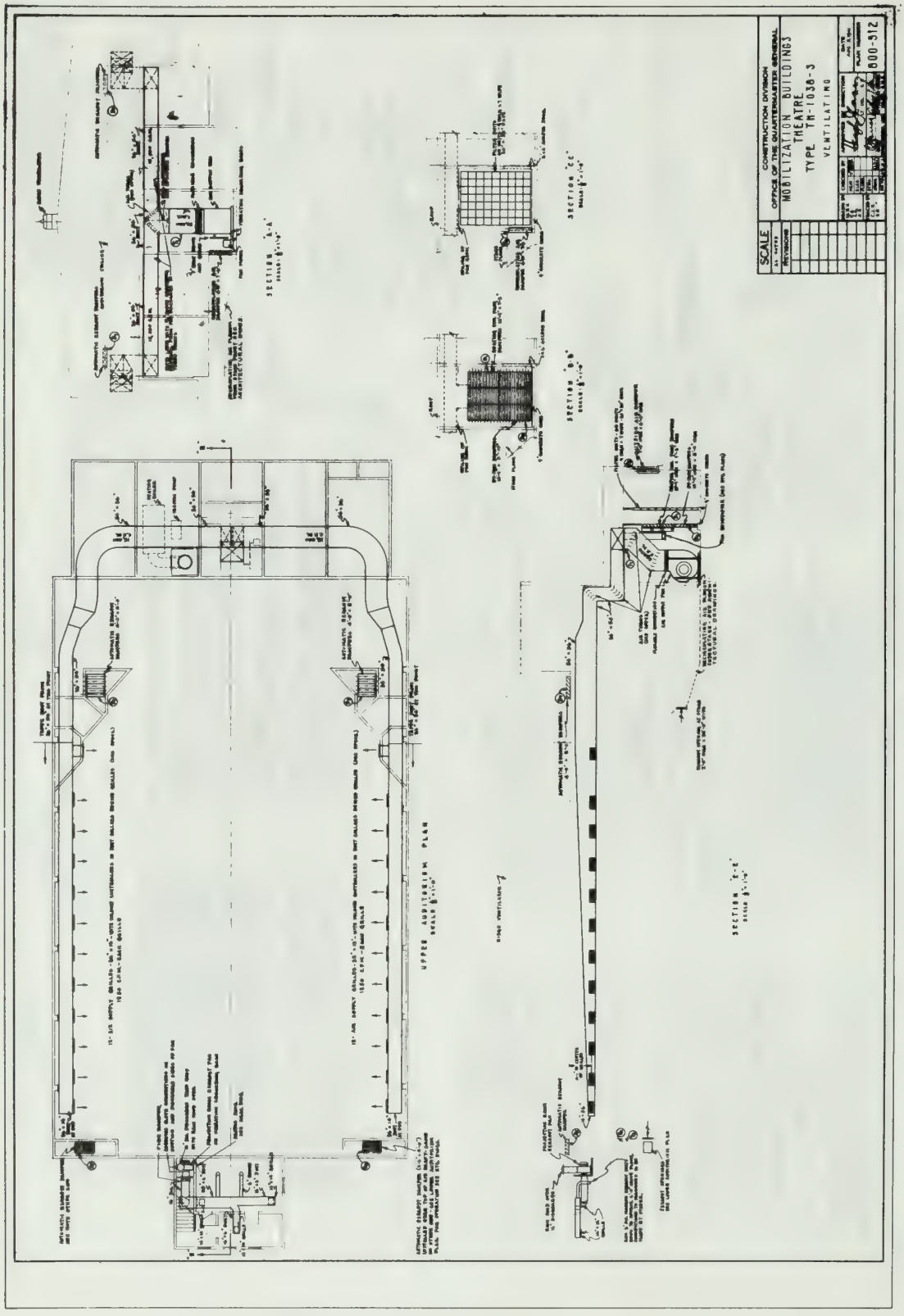
SCALE: AS NOTED

REVISIONS

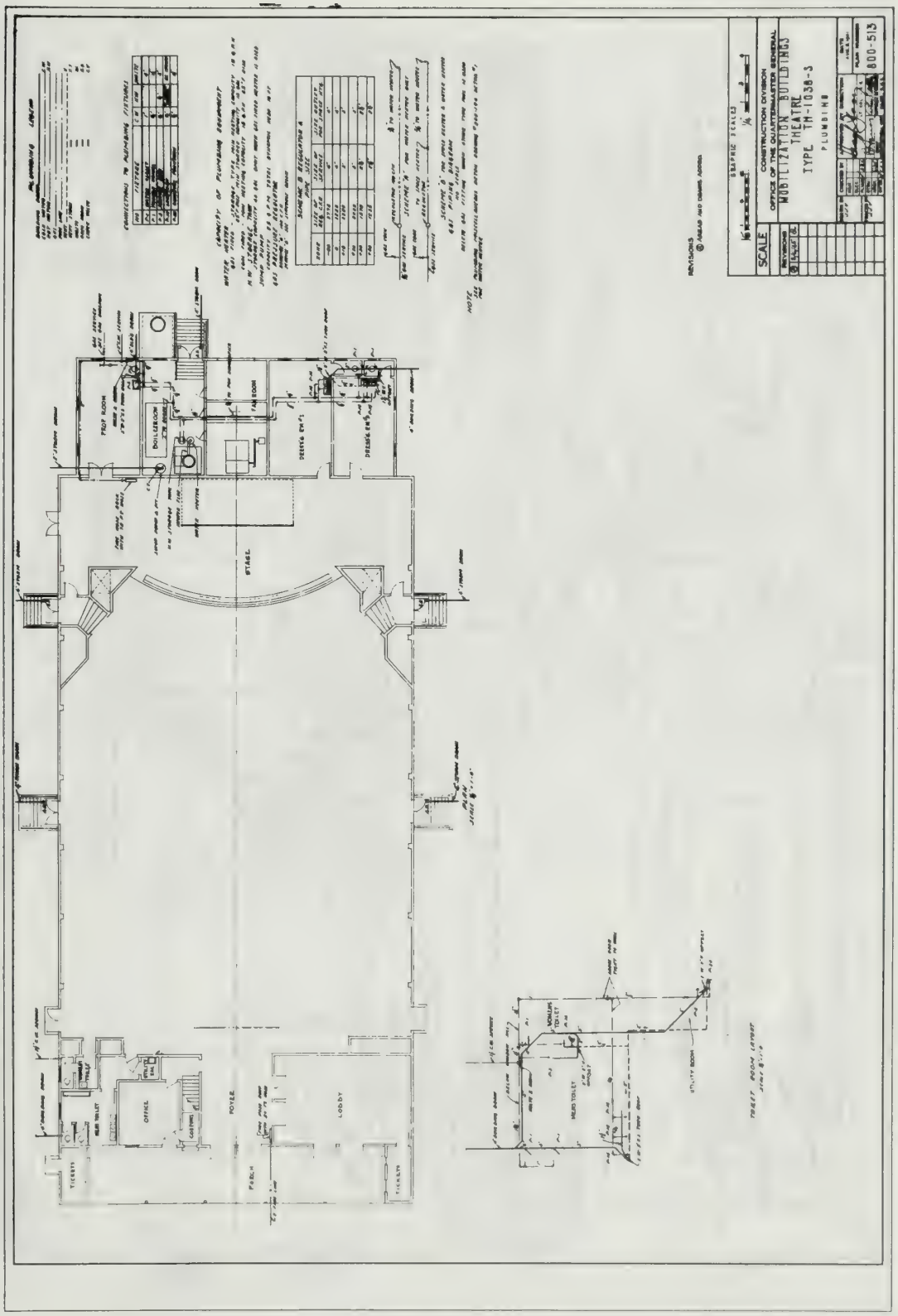
CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL
MOBILIZATION BUILDINGS
THEATRE
TYPE TM-1038-S
VENTILATING

DESIGNED BY: C.C.L. S.S.A.
CHECKED BY: E.L.K.C. TONE
TRACED BY: S.S.A.
RECOMMENDED FOR APPROVAL BY DIRECTOR OF INSPECTION
APPROVED BY CHIEF ENGINEER
DATE: AUG. 9, 1941
PLAN NUMBER: 800-511

Plan Number 800-512



Plan Number 800-513



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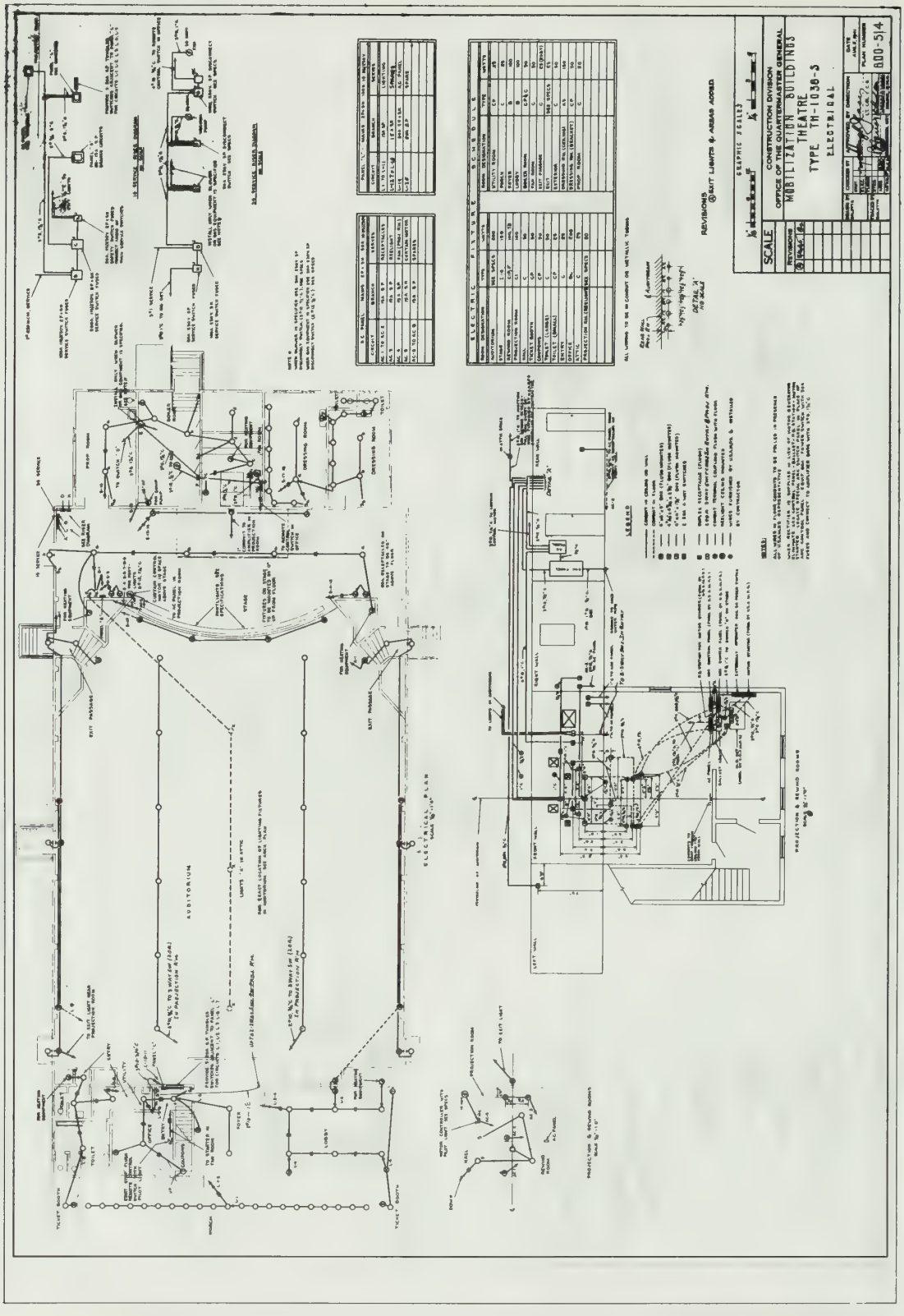

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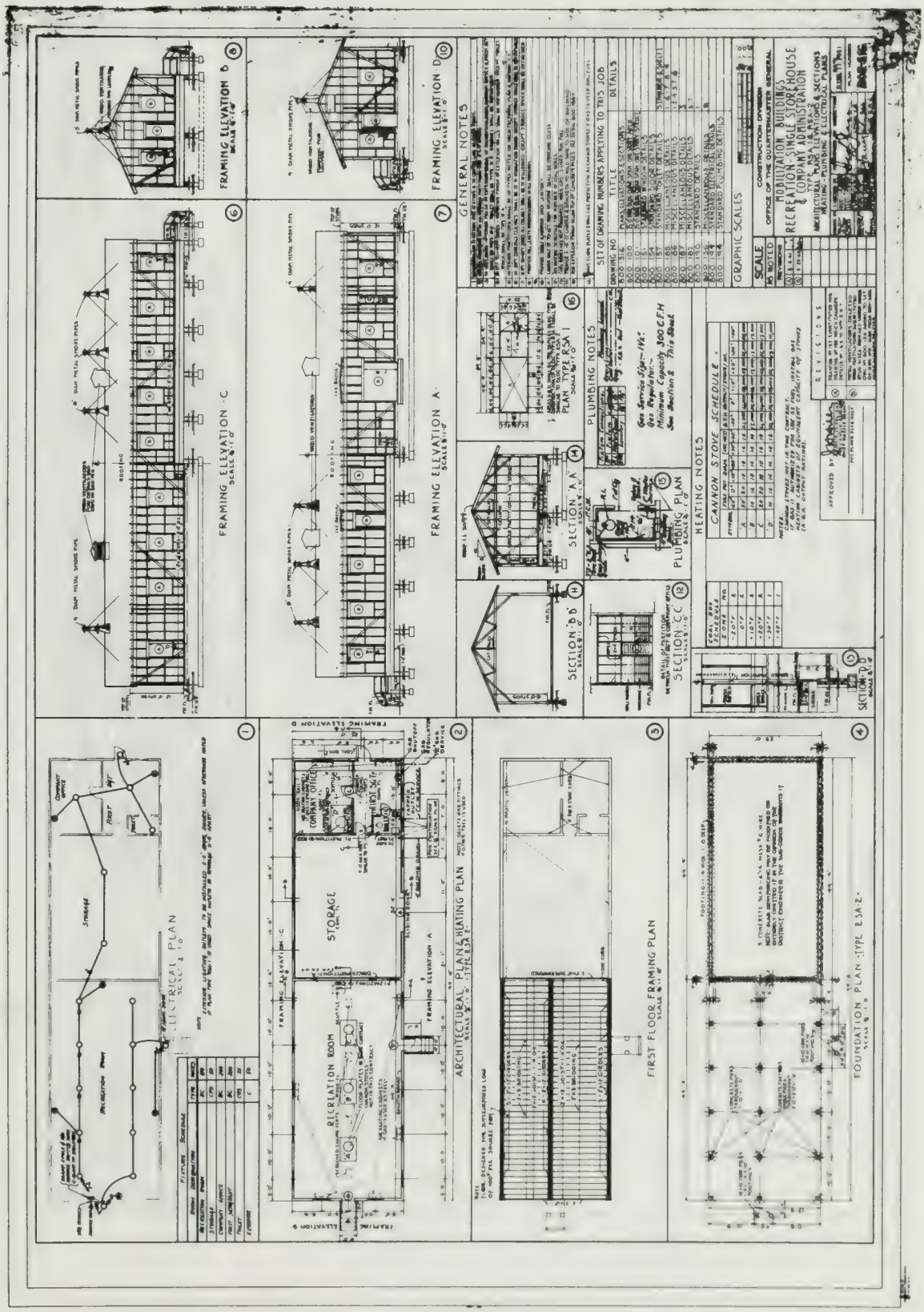

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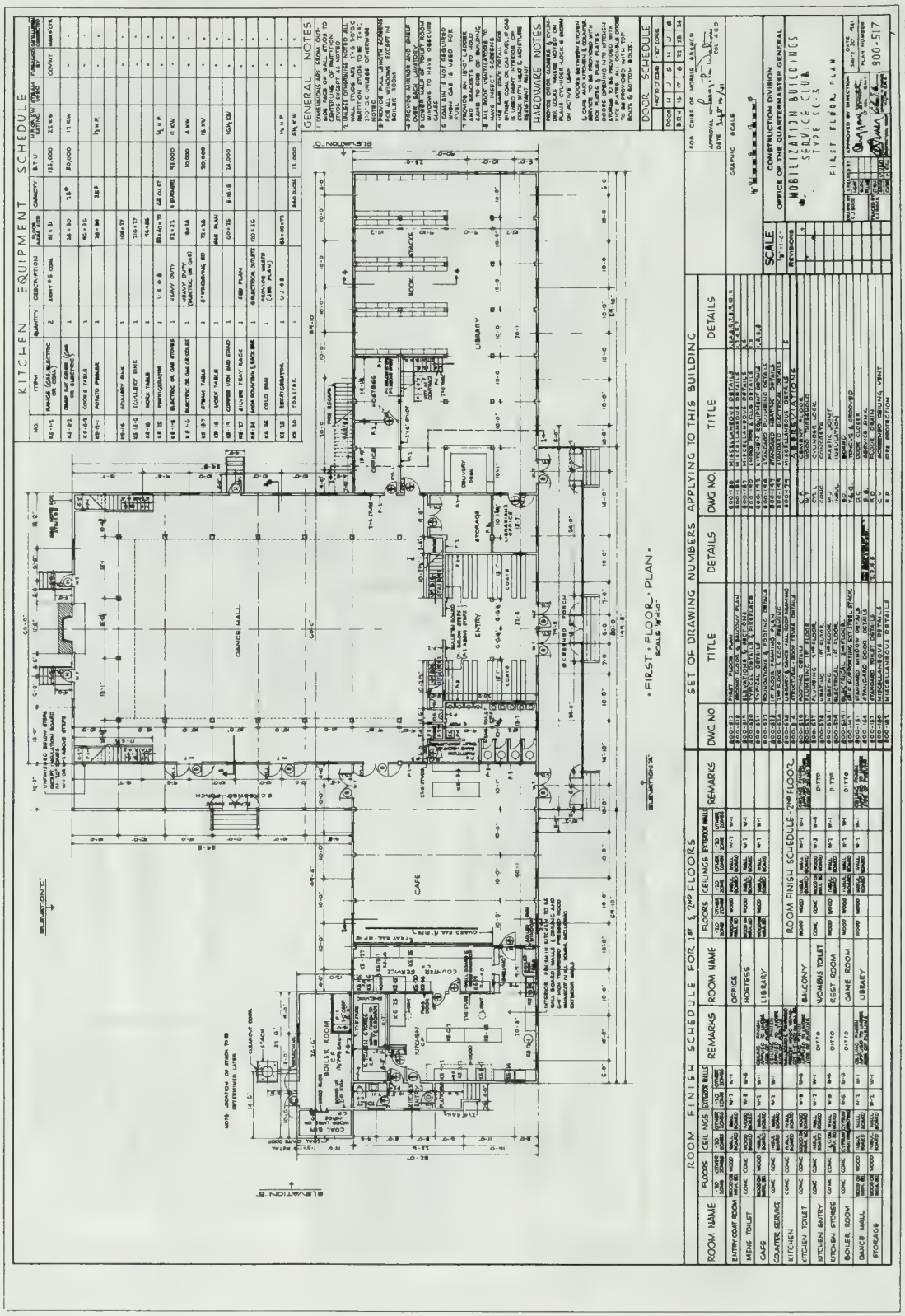

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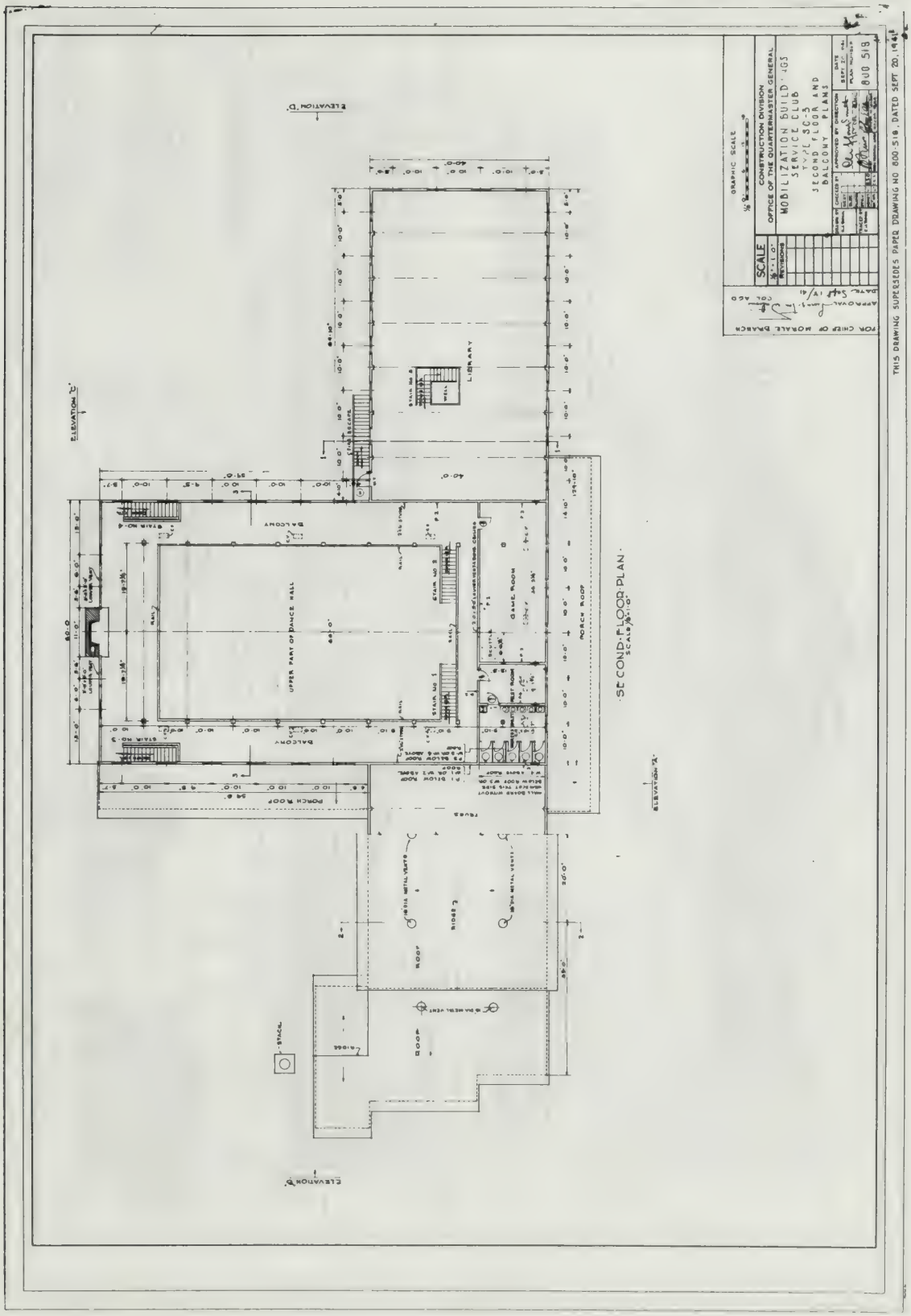

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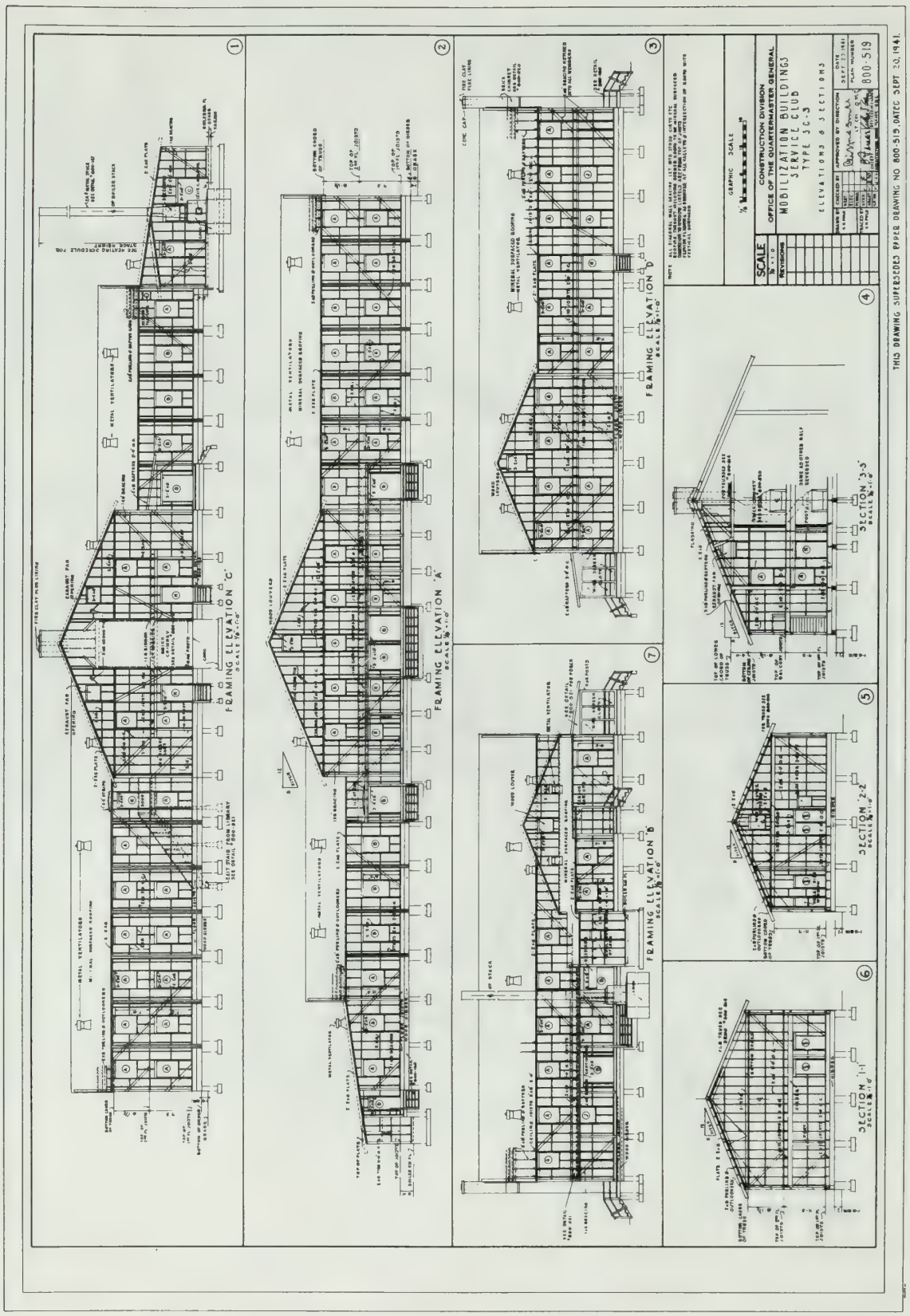

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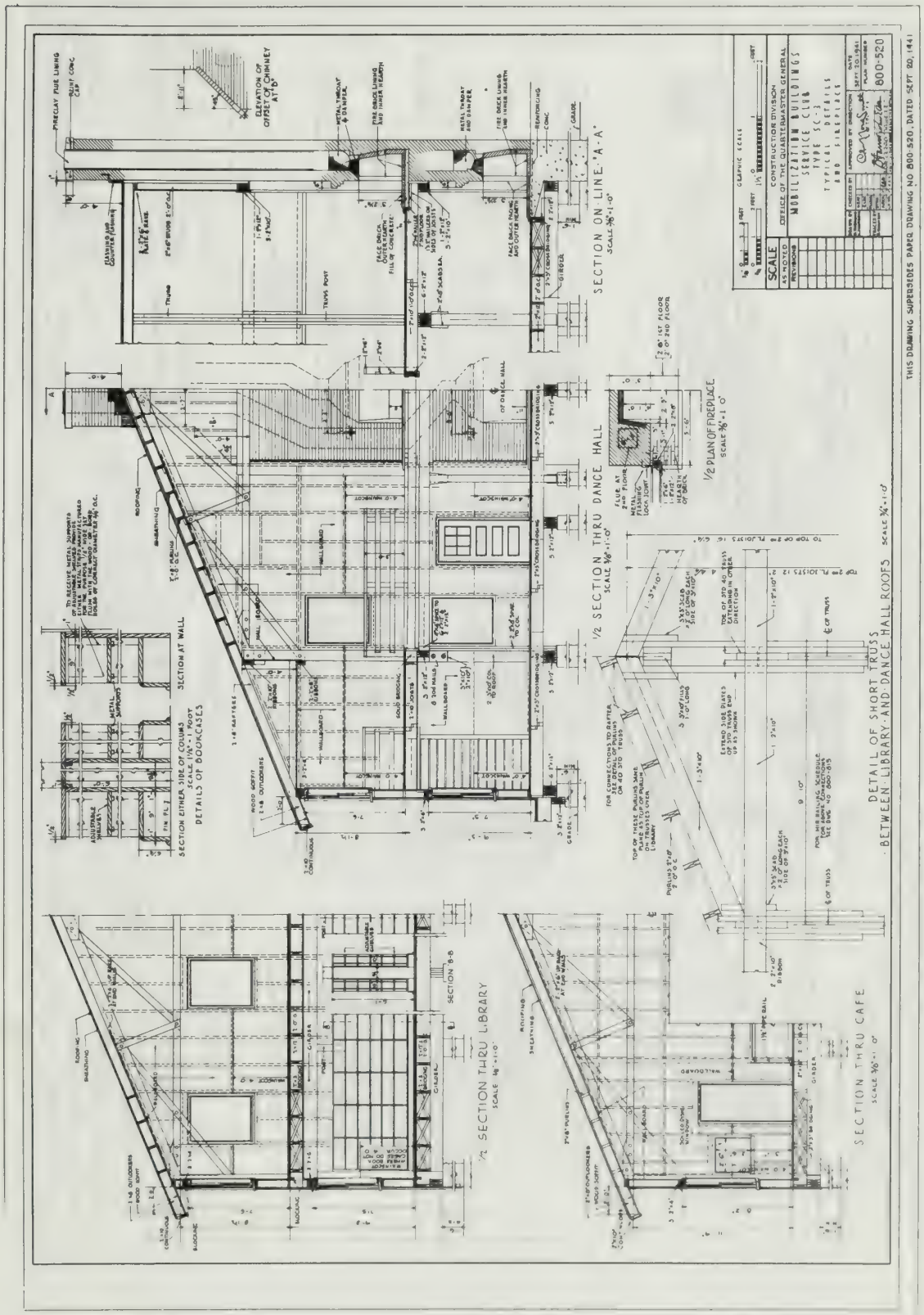

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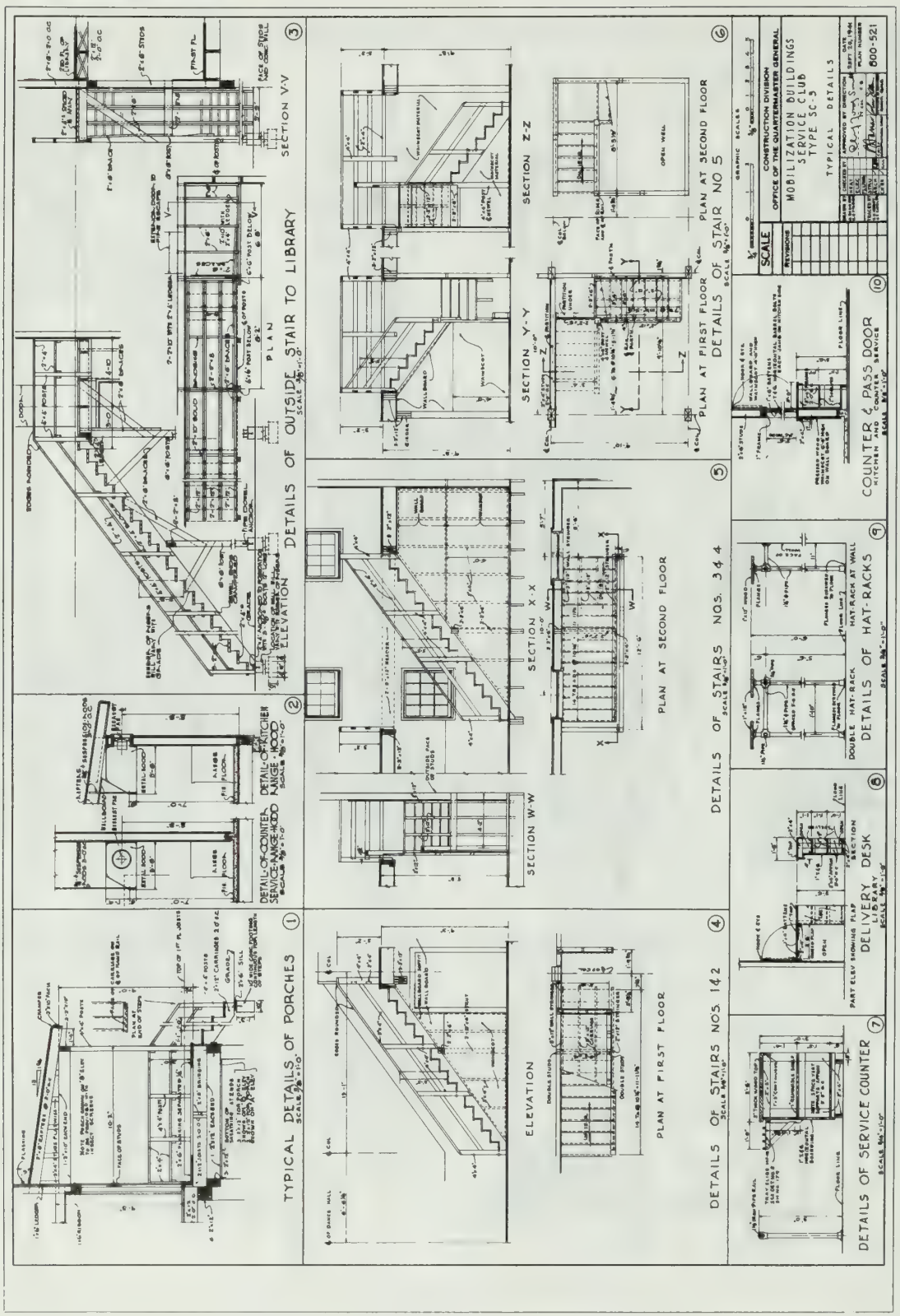
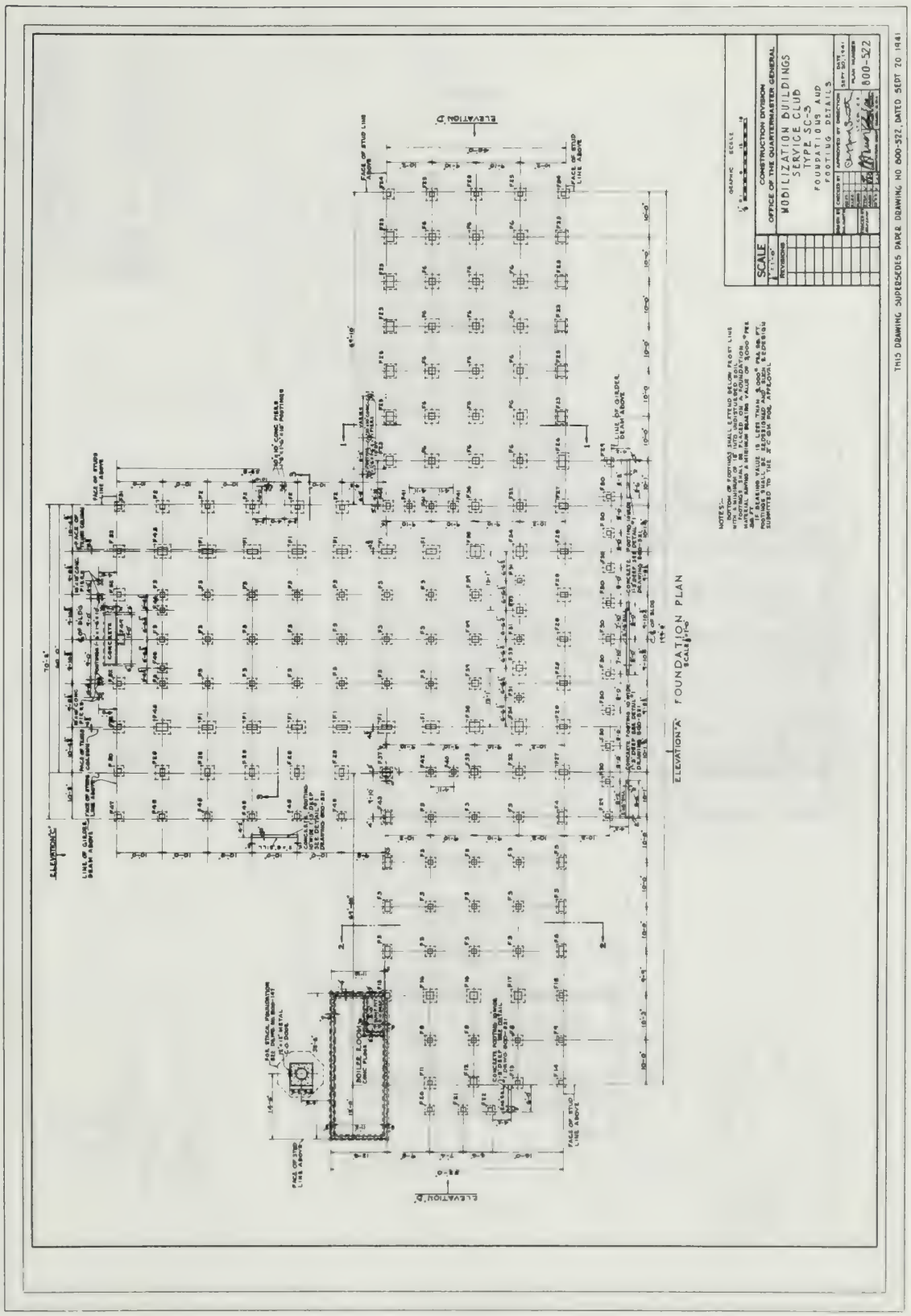


THIS DRAWING SUPERSEDES PAPER DRAWING NO. 800-521 DATED SEPT 20, 1941

Plan Number 800-522



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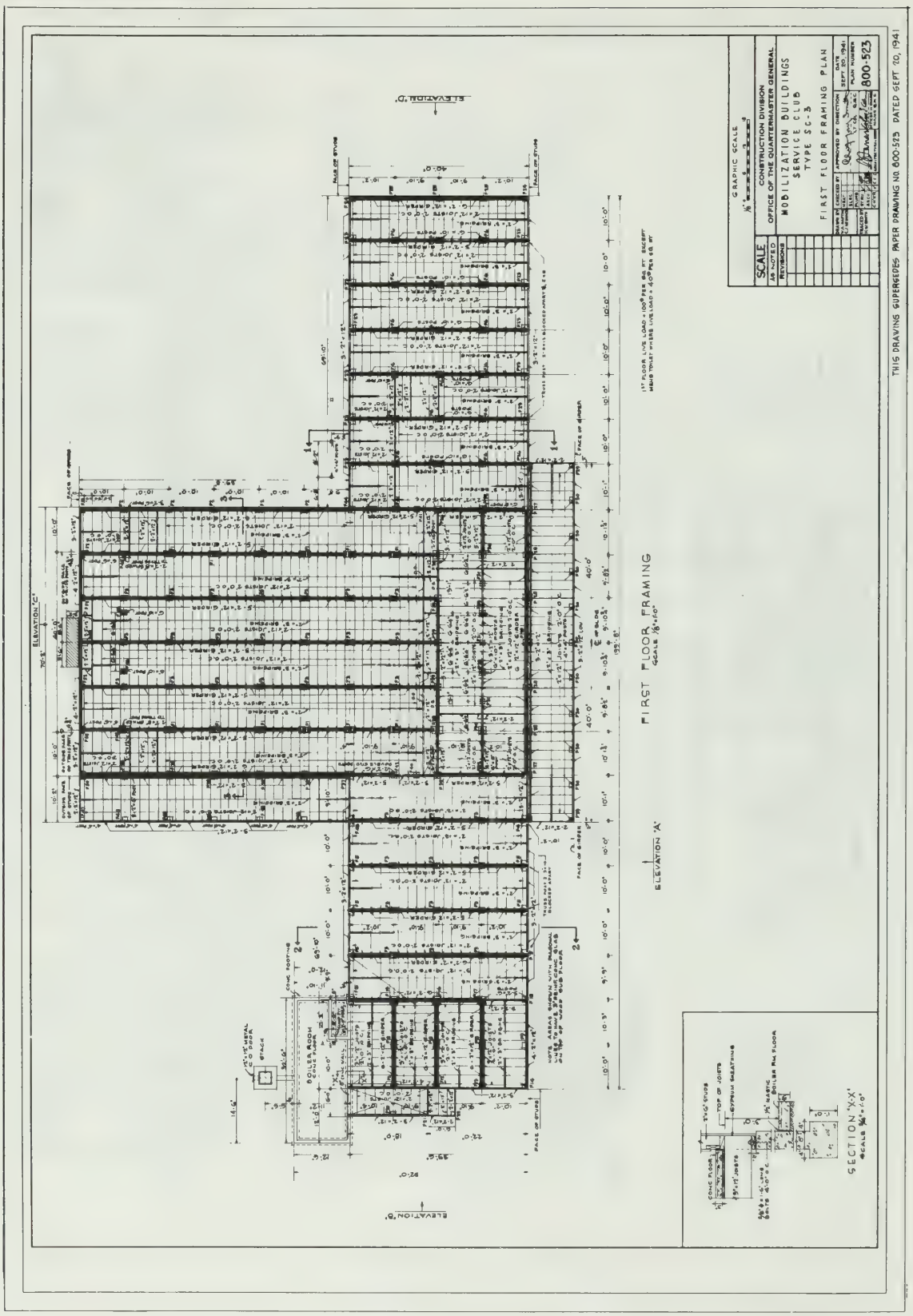

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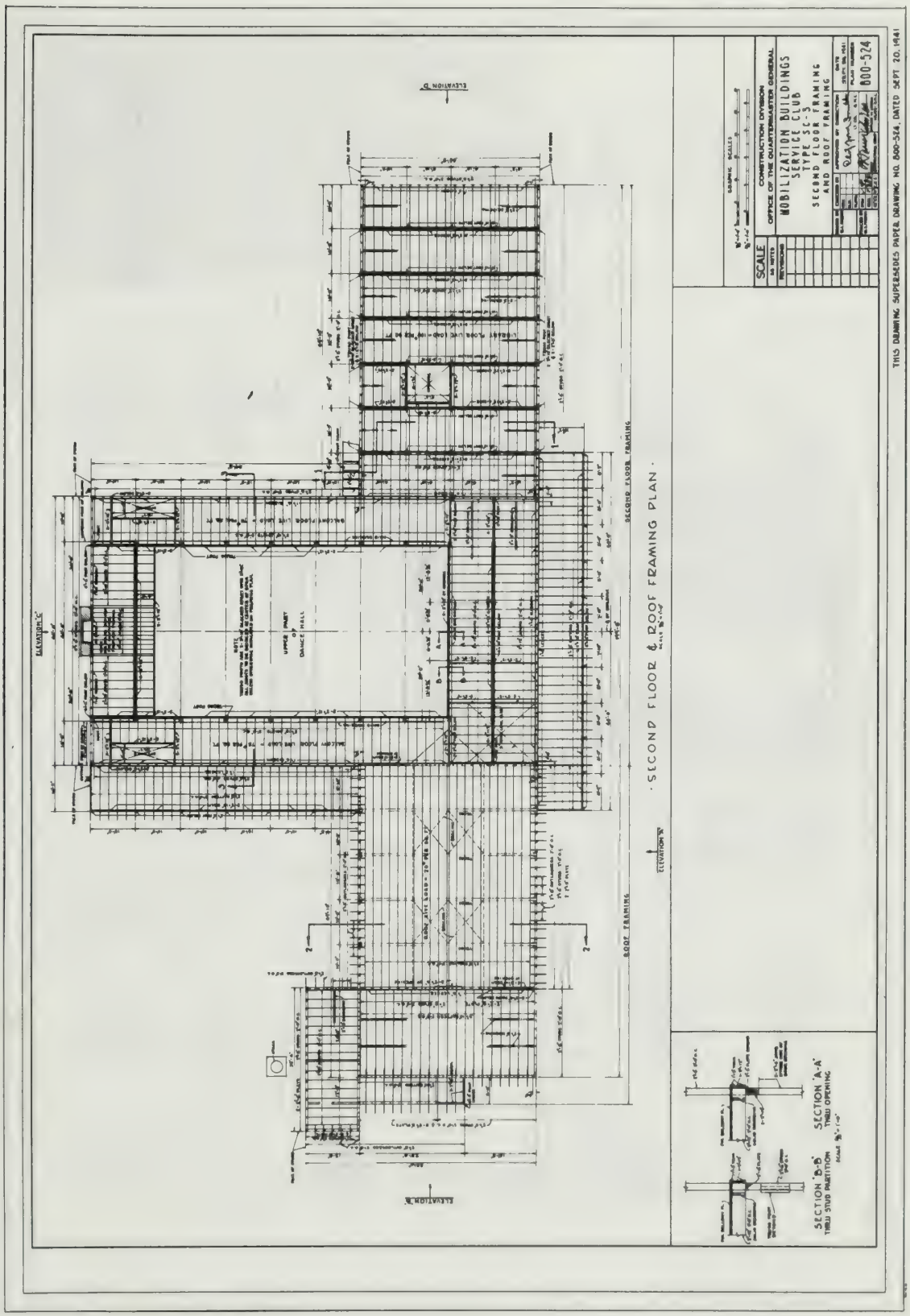

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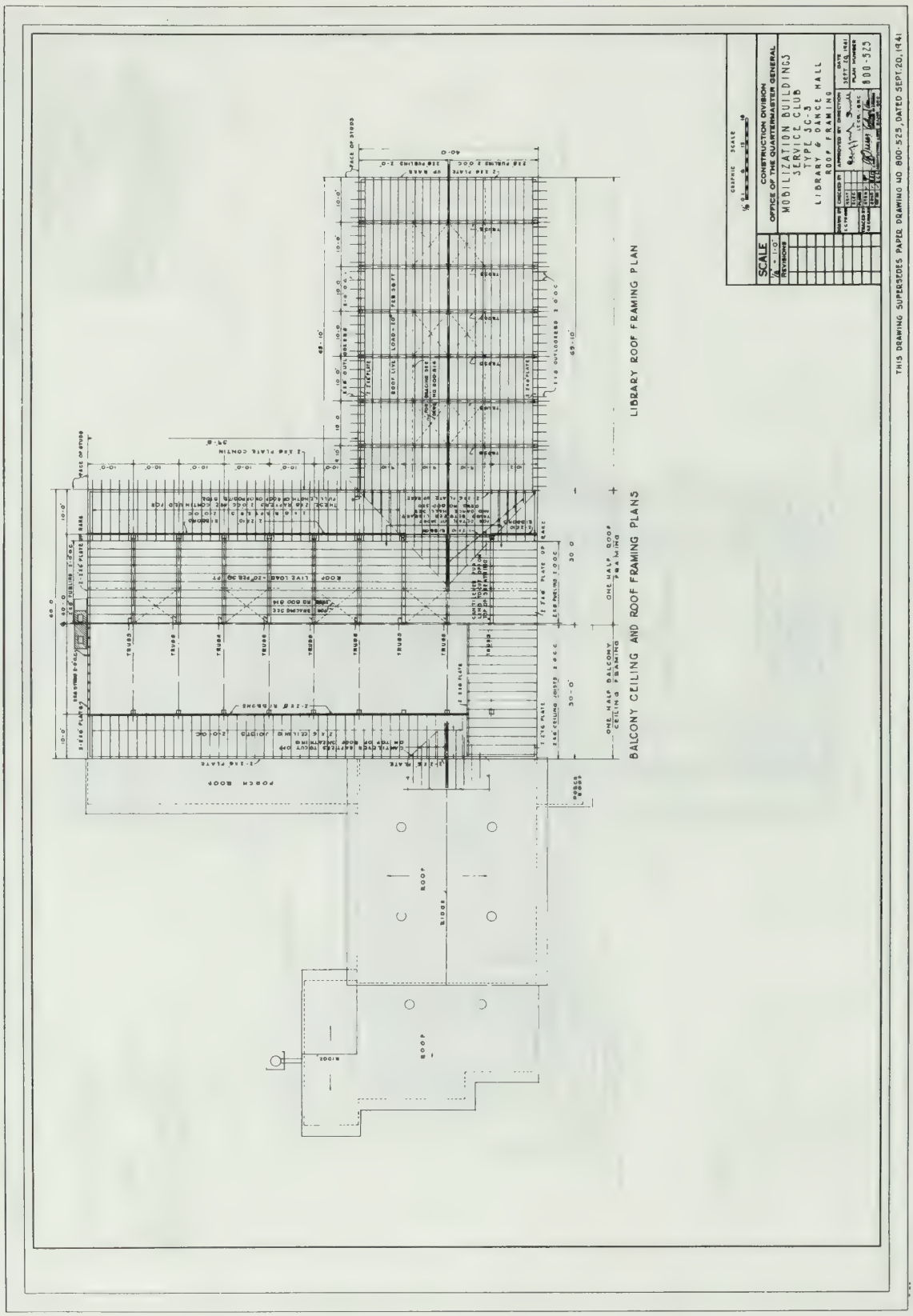


Plan Number 800-526

FOOTING SCHEDULE

Footing No.	A	B	C	D	E	Dowels
F1	2'-6	3'-0	1'-0	2'-4	1'-1	6-#6
F2	2'-6	2'-6	1'-0	1'-0	1'-0	4-#6
F3	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F4	3'-0	2'-3	3/4 in. Outlet	1'-0	1'-0	4-#6
F5	3'-0	3'-0	3/4 in. Outlet	1'-4	1'-3	4-#7
F6	3'-0	3'-0	1'-4	1'-4	1'-3	4-#7
F7						
F8	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F9	2'-0	2'-0	1'-0	1'-0	1'-0	4-#6
F10	2'-6	2'-6	1'-6	1'-6	1'-0	4-#6
F11	2'-3	2'-3	1'-0	1'-2	1'-0	4-#6
F12	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F13	2'-0	2'-0	1'-0	1'-0	1'-0	4-#6
F14	2'-6	2'-6	1'-6	1'-6	1'-0	4-#6
F15	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-0	4-#6
F16	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-1	4-#7
F17	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-2	4-#7
F18	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F19	2'-0	2'-0	1'-0	1'-0	1'-0	4-#6
F20	2'-0	2'-0	3/4 in. Outlet	1'-0	1'-0	4-#6
F21	2'-3	2'-3	1'-0	1'-2	1'-0	4-#6
F22	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F23	2'-6	2'-6	1'-6	1'-6	1'-0	4-#6
F24	2'-3	2'-3	1'-0	1'-2	1'-0	4-#6
F25	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-0	4-#6
F26	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-1	4-#7
F27	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-2	4-#7
F28	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F29	2'-0	2'-0	1'-0	1'-0	1'-0	4-#6
F30	2'-0	2'-0	3/4 in. Outlet	1'-0	1'-0	4-#6
F31	2'-3	2'-3	1'-0	1'-2	1'-0	4-#6
F32	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F33	2'-6	2'-6	1'-6	1'-6	1'-0	4-#6
F34	2'-3	2'-3	1'-0	1'-2	1'-0	4-#6
F35	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-0	4-#6
F36	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-1	4-#7
F37	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-2	4-#7
F38	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F39	2'-0	2'-0	1'-0	1'-0	1'-0	4-#6
F40	2'-0	2'-0	3/4 in. Outlet	1'-0	1'-0	4-#6
F41	2'-3	2'-3	1'-0	1'-2	1'-0	4-#6
F42	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F43	2'-6	2'-6	1'-6	1'-6	1'-0	4-#6
F44	2'-3	2'-3	1'-0	1'-2	1'-0	4-#6
F45	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-0	4-#6
F46	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-1	4-#7
F47	3'-0	3'-0	3/4 in. Outlet	1'-8	1'-2	4-#7
F48	2'-3	2'-3	1'-0	1'-0	1'-0	4-#6
F49	2'-0	2'-0	1'-0	1'-0	1'-0	4-#6
F50	2'-0	2'-0	3/4 in. Outlet	1'-0	1'-0	4-#6
F51	2'-3	2'-3	1'-0	1'-2	1'-0	4-#6
F52	2'-6	2'-6	1'-0	1'-0	1'-0	4-#6

SCALE 1/4" = 1'-0"

REVISIONS

CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL

MOBILIZATION BUILDINGS
SERVICE CLUB
TYPE SC-3

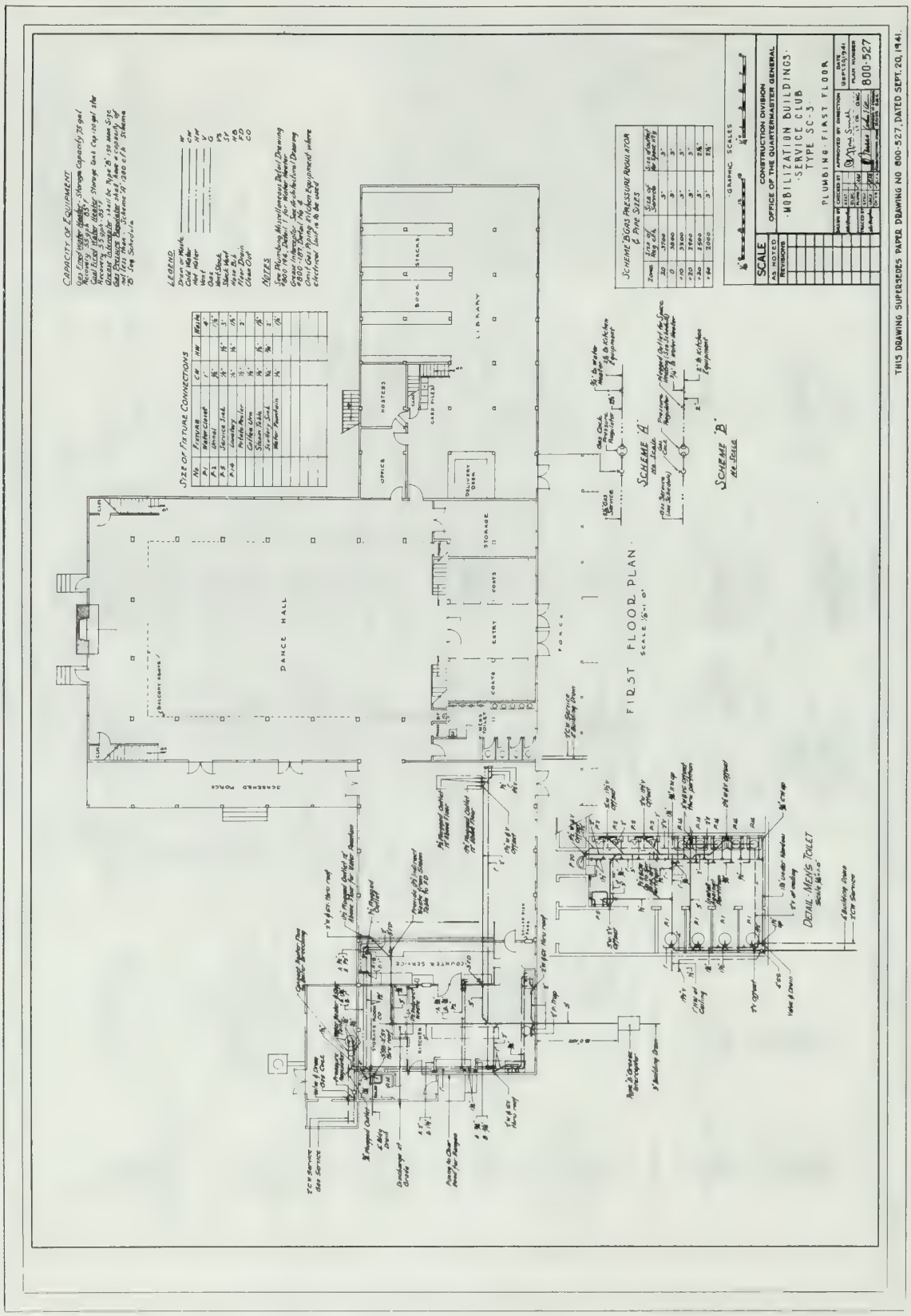
FOOTING DETAILS

DRAWN BY | CHECKED BY | APPROVED BY DIRECTOR | DATE SEPT 20, 1941

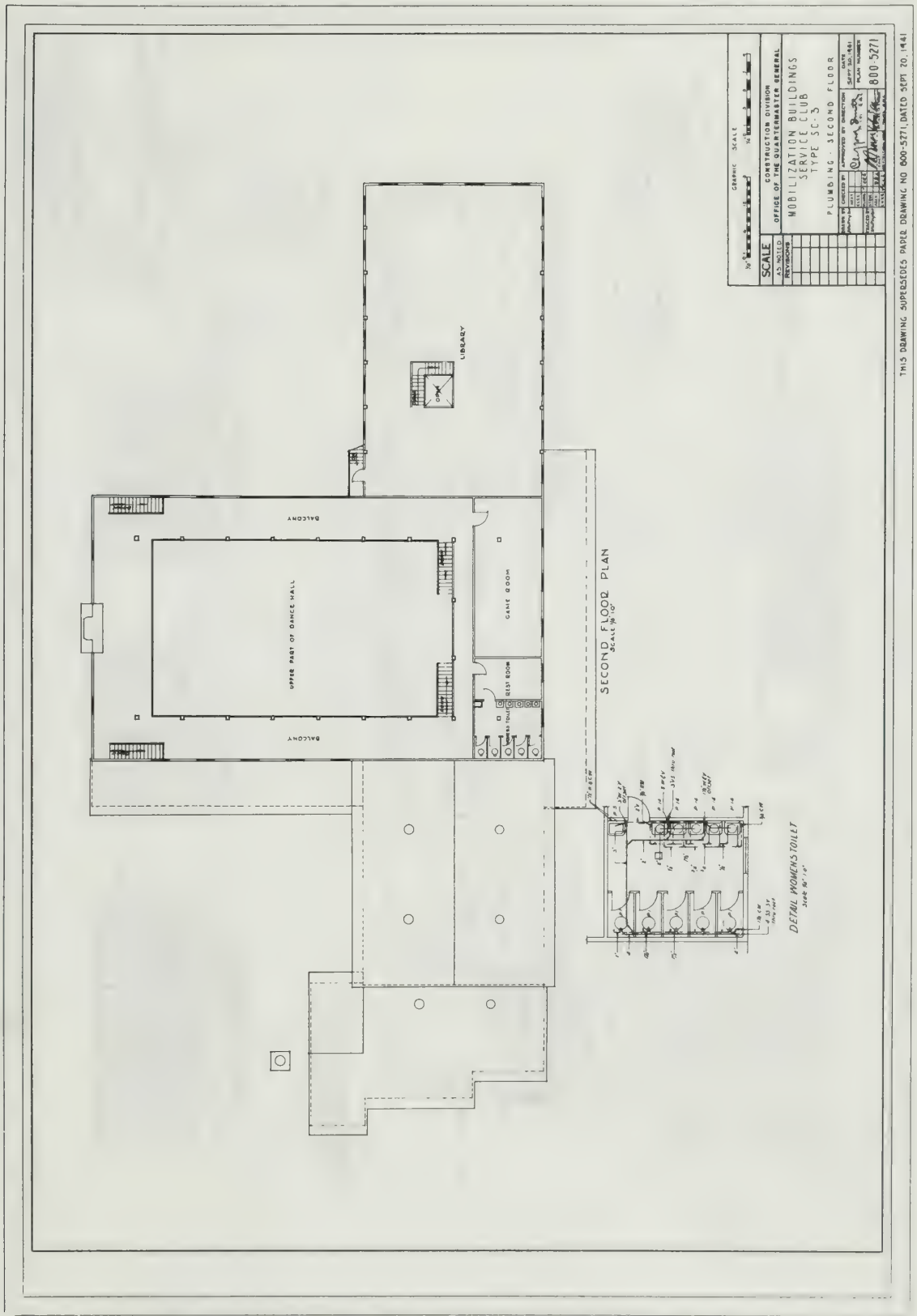
PLAN NUMBER 800-526

THIS DRAWING SUPERSEDES PAPER DRAWING NO 800-526 DATED SEPT 20, 1941

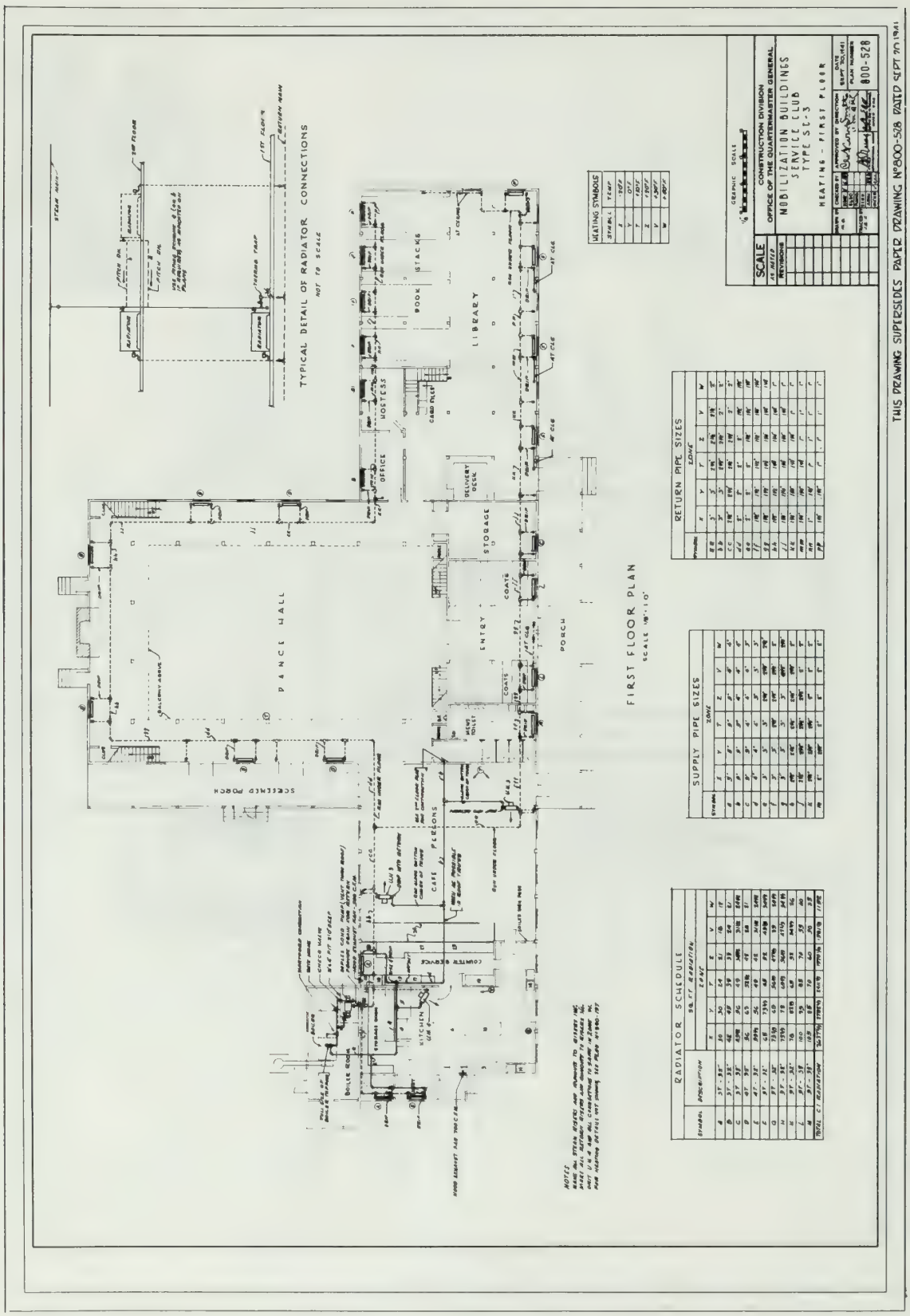
Plan Number 800-527

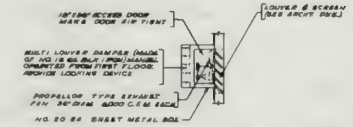


Plan Number 800-527.1

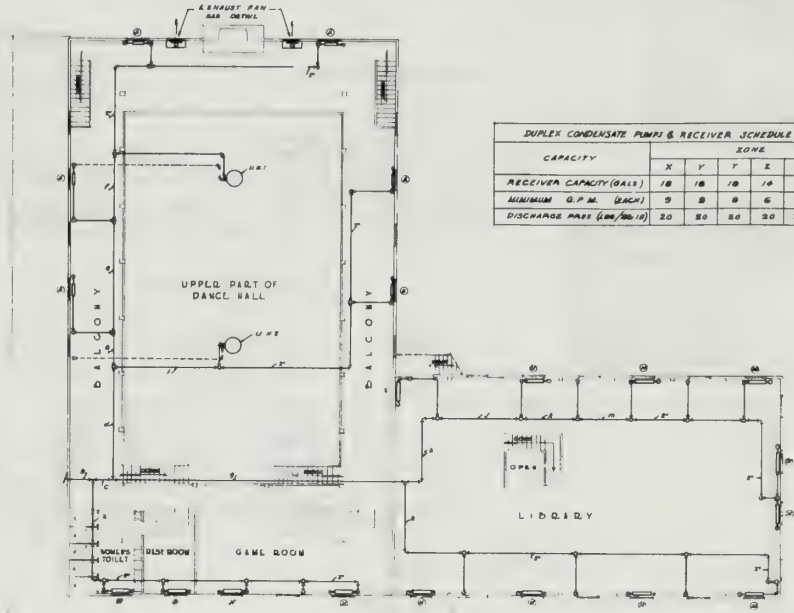


Plan Number 800-528





DETAIL OF EXHAUST FAN
NO SCALE



SECOND FLOOR PLAN
SCALE 1/8"=1'-0"

DUPLEX CONDENSATE PUMPS & RECEIVER SCHEDULE						
CAPACITY	ZONE					
	X	Y	T	Z	V	W
RECEIVER CAPACITY (GALS.)	18	18	18	14	14	14
MINIMUM G.P.M. (EACH)	9	9	9	6	6	6
DISCHARGE HEAD (FEET)	20	20	20	20	20	20

UNIT HEATER SCHEDULE										
ZONE	SYMBOL	NO. OF UNITS	TYPE (PROPELLOR HEAVY)	CAPACITY B.T.U./HR.	STD. AIR RATING CU. FT. PER MIN.	ENT. AIR TEMP. °F.	TRAP CAP. LBS. CONDENSATE PER HR.	SUPPLY CONN. SIZE	RETURN CONN. SIZE	TOTAL CAP. B.T.U./HR.
X & Y	UH 1	1	V	220,000	3,500	70	428	2"	1"	565,000
	UH 2	1	V	173,000	3,000	70	338	2"	1"	
	UH 3	2	H	78,000	1,500	70	200	1½"	1"	
	UH 4	1	H	40,000	500	50	200	1¼"	¾"	
T	UH 1	1	V	178,000	3,000	70	350	2"	1"	478,000
	UH 2	1	V	126,000	2,000	70	300	2"	1"	
	UH 3	2	H	60,000	1,000	70	200	1½"	1"	
	UH 4	1	H	30,000	400	80	200	1¼"	¾"	
Z	UH 1	1	V	180,000	3,000	70	300	2"	1"	395,000
	UH 2	1	V	125,000	2,500	70	250	2"	1"	
	UH 3	2	H	50,000	1,000	70	200	1½"	1"	
	UH 4	1	H	20,000	300	50	200	1¼"	¾"	
V	UH 1	1	V	132,000	2,500	70	250	2"	1"	328,000
	UH 2	1	V	100,000	2,000	70	200	1½"	1"	
	UH 3	2	H	60,000	750	70	200	1½"	¾"	
	UH 4	1	H	20,000	300	50	200	1¼"	¾"	
W	UH 1	1	V	180,000	3,000	70	300	2"	1"	285,000
	UH 2	1	V	75,000	1,500	70	200	1½"	¾"	
	UH 3	2	H	30,000	500	70	200	1¼"	¾"	

BOILER SCHEDULE						
TYPE	ZONE					
	X	Y	T	Z	V	W
CAST IRON HAND FIRED BIT COAL 36 FT STEAM E.B.R.	6730	6900	6000	4870	3950	2820
MAXIMUM COMBUSTION RATE LBS COAL/SQ FT GRATE/HR	6.0	6.0	6.0	6.0	6.0	5.5
MAXIMUM EFFICIENCY (FOR DETERMINING GRATE AREA) %	68	68	68	68	68	68
CAST IRON GAS FIRED 30 FT STEAM A.G.A. OUTPUT RATING	8370	8600	7500	6050	4930	3500
STEEL HAND FIRED 30 FT STEAM S.B.I. RATING	7000	7200	6000	5000	4000	3000
STEEL MECHANICALLY FIRED 36 FT STEAM S.B.I. RATING	8400	8500	7200	6000	4800	3450

CHIMNEY SCHEDULE		
DIMENSION	FUEL	
INSIDE DIAMETER OF FLUE	COAL	26"
	GAS	22"
HEIGHT ABOVE BOILER ROOM FLOOR	BITUMINOUS COAL	65
	ANTHRACITE COAL WITH BLOWER	55
	GAS	1 FOOT ABOVE HIGHEST ROOF

NOTE CHIMNEY DIMENSIONS ARE FOR ALL BOILERS

GRAPHIC SCALE

SCALE: AS NOTED
REVISIONS

CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL

MOBILIZATION BUILDINGS
SERVICE CLUB
TYPE 30-3
HEATING - SECOND FLOOR

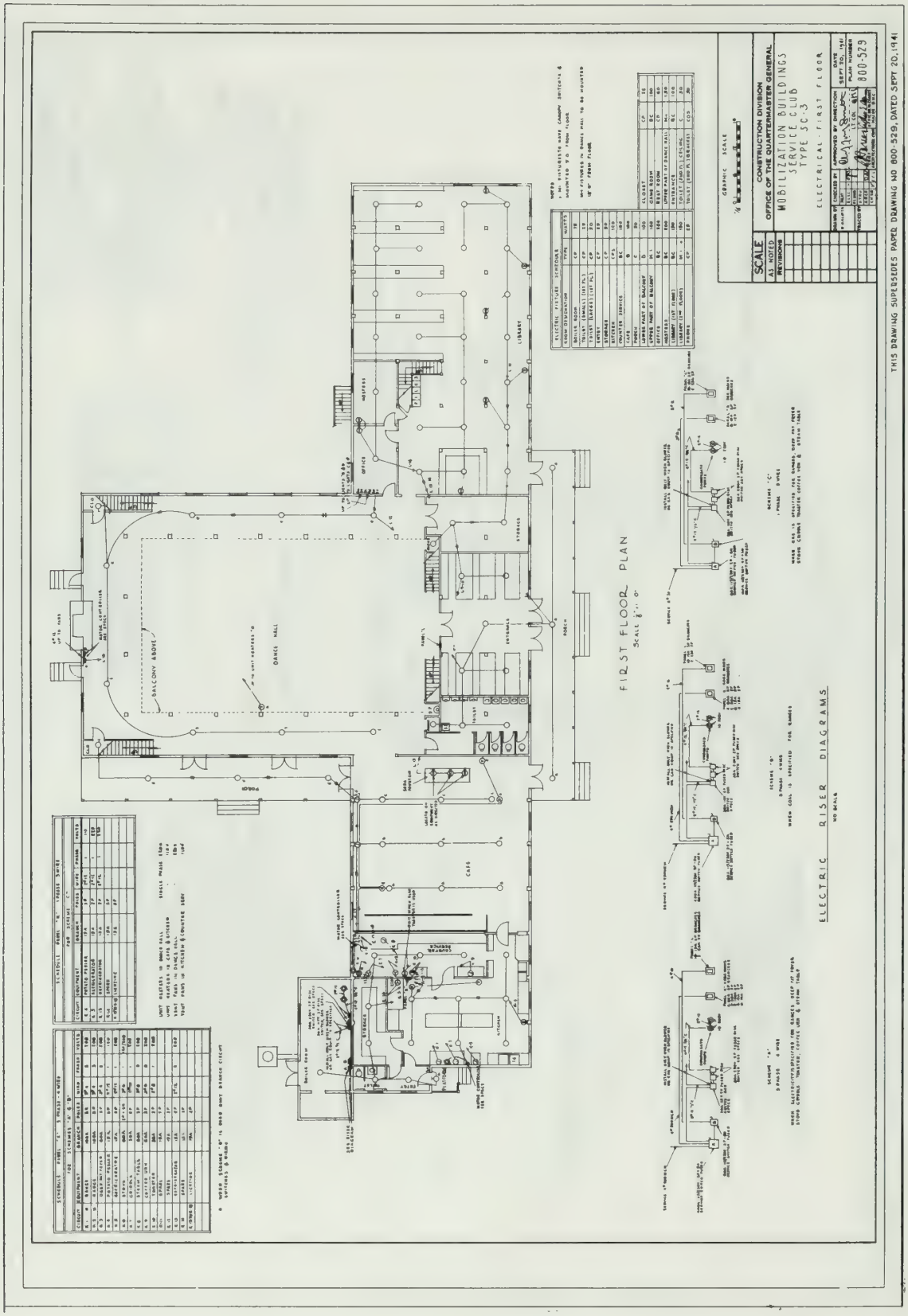
DRAWN BY: M.S.
CHECKED BY: E.B.S.T. / C.T.S. / C.A.T. / C.M.W.
APPROVED BY DIRECTION: Wesley Smith, LT. COL. G.S.C.
TRACED BY: C.T.S. / C.A.T. / C.M.W.
DATE: SEPT 20, 1941
PLAN NUMBER: 800-528.1

THIS DRAWING SUPERSEDES PAPER DRAWING NO 800-528.1, DATED SEPT 20, 1941

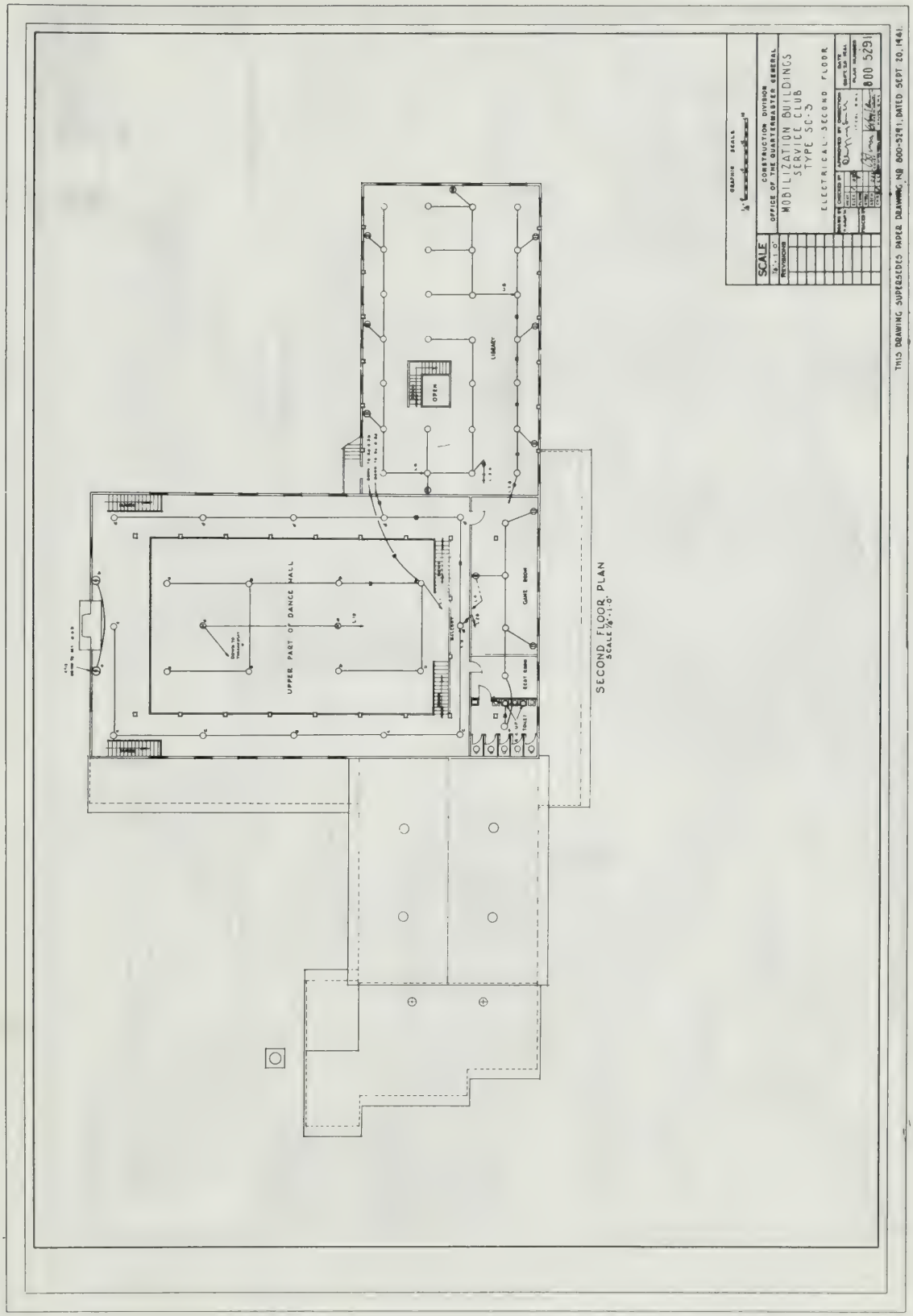
700 and 800 Series Mobilization Drawings page 511

Plan Number 800-528.1

Plan Number 800-529



Plan Number 800-529.1



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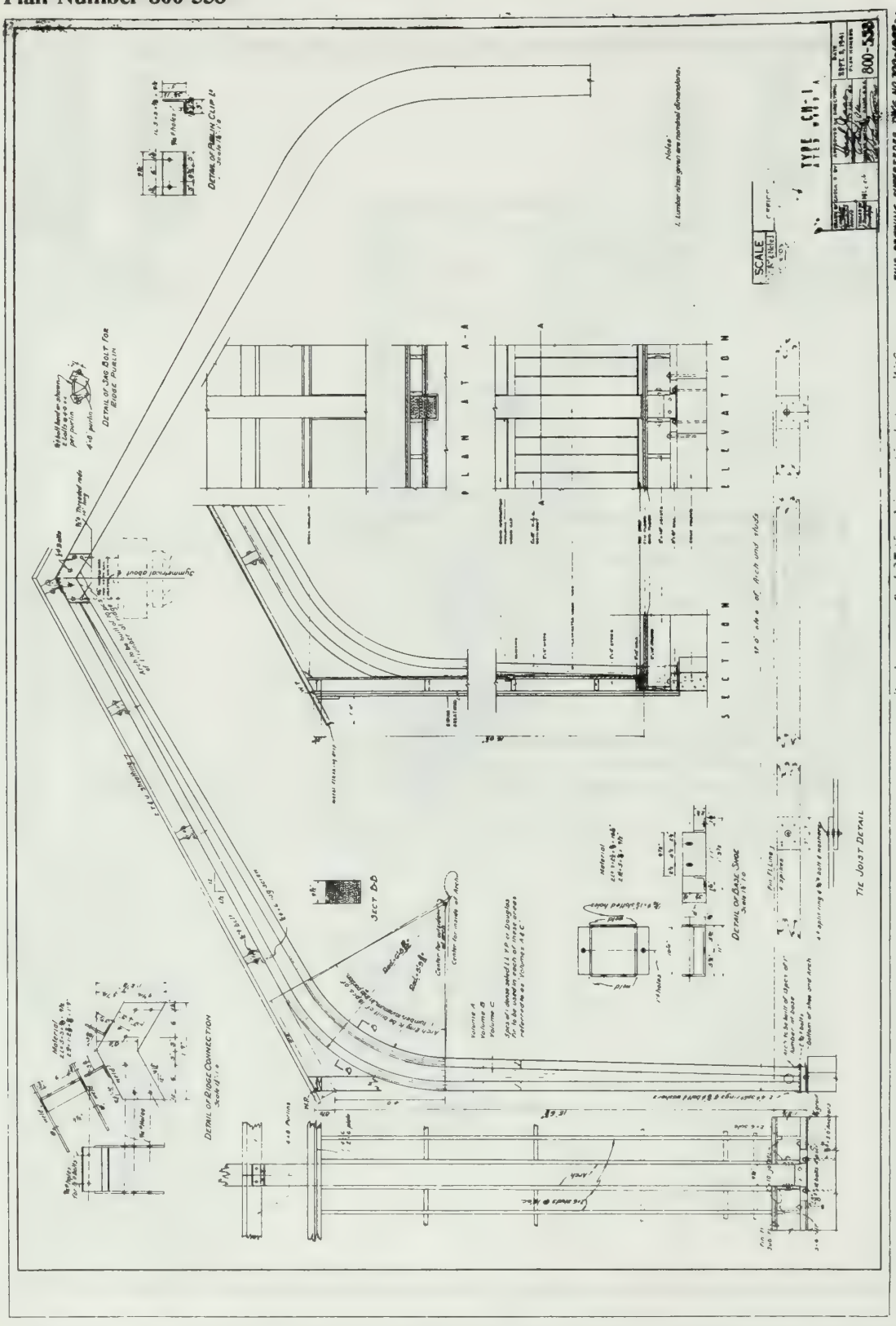

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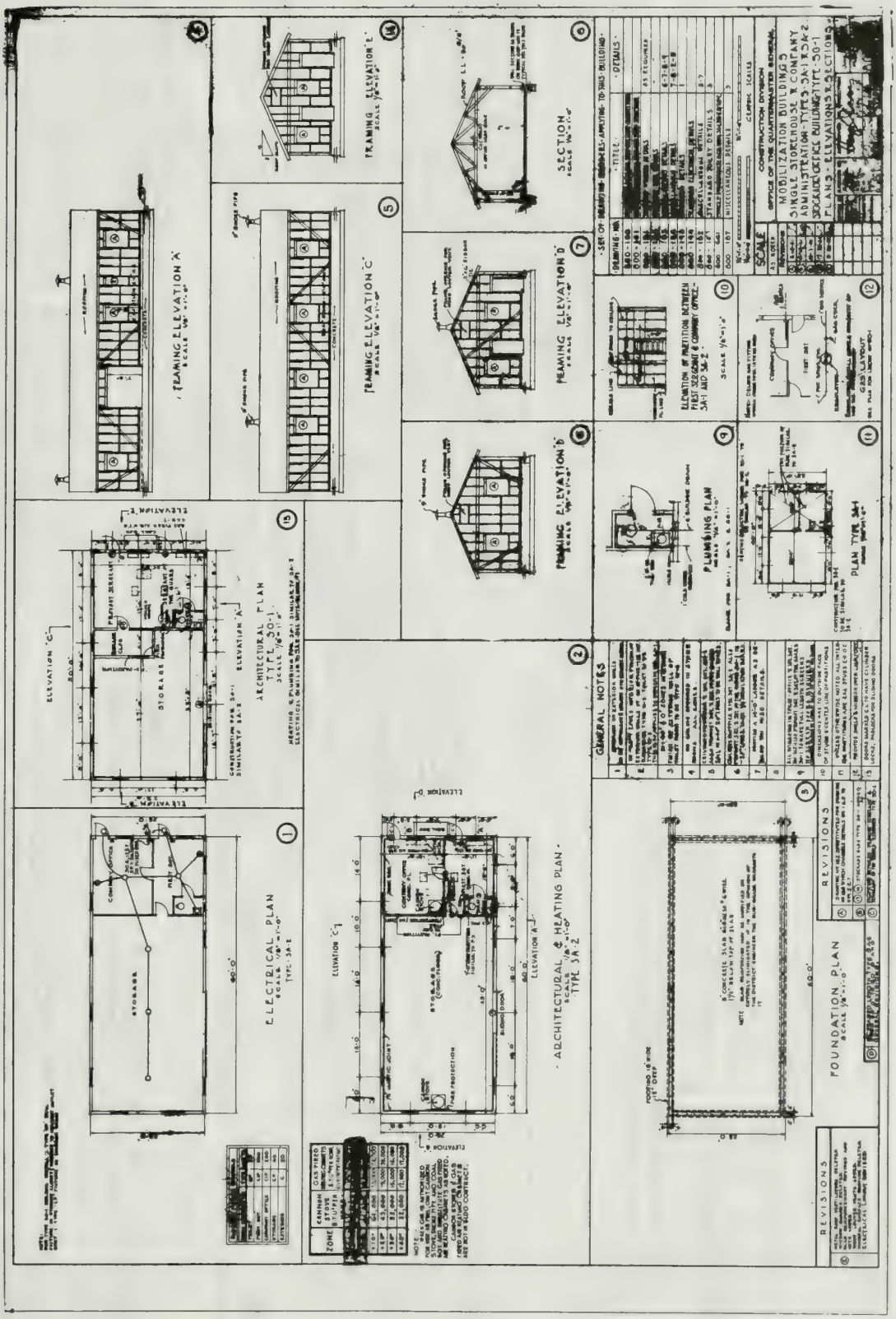

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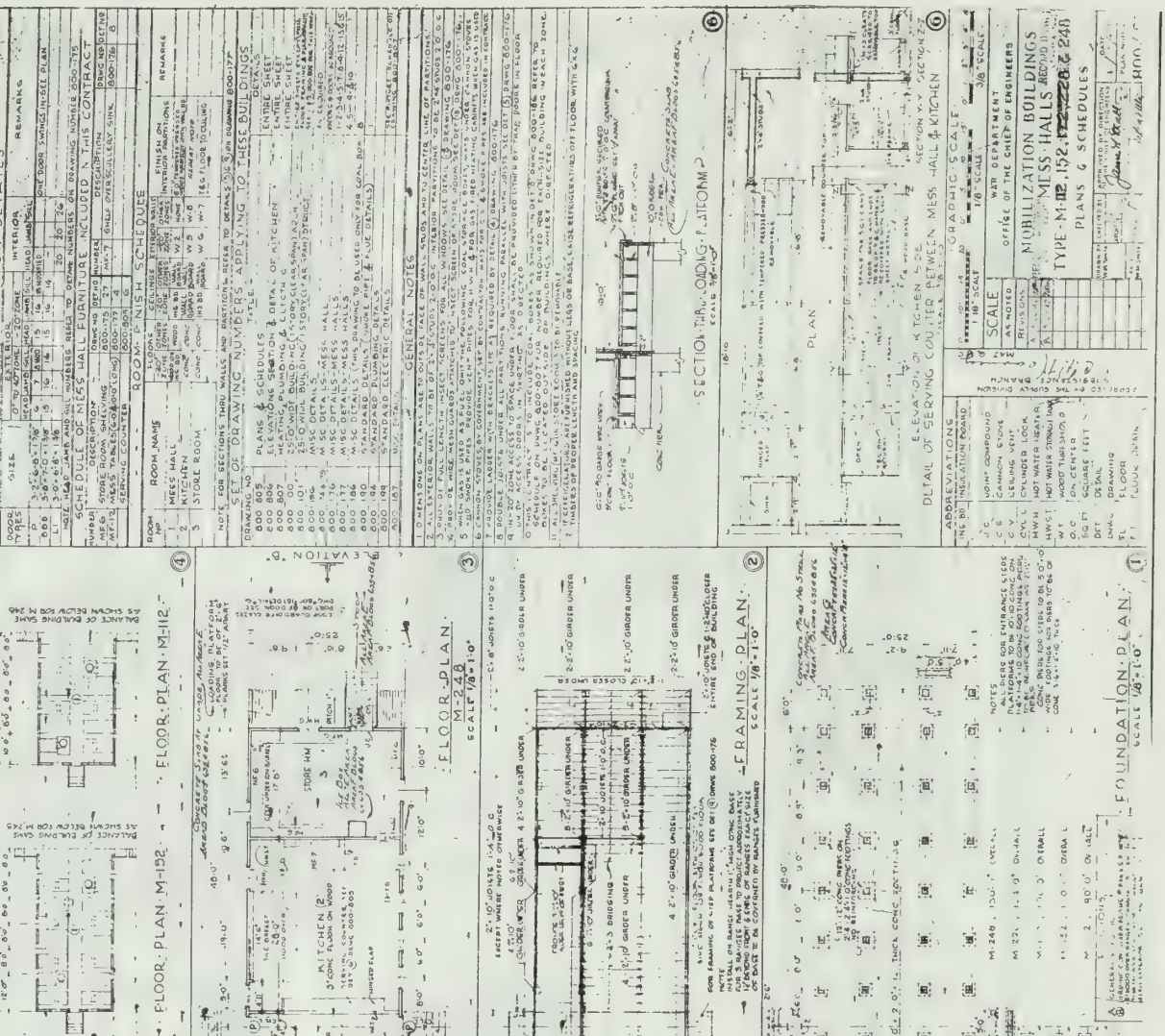

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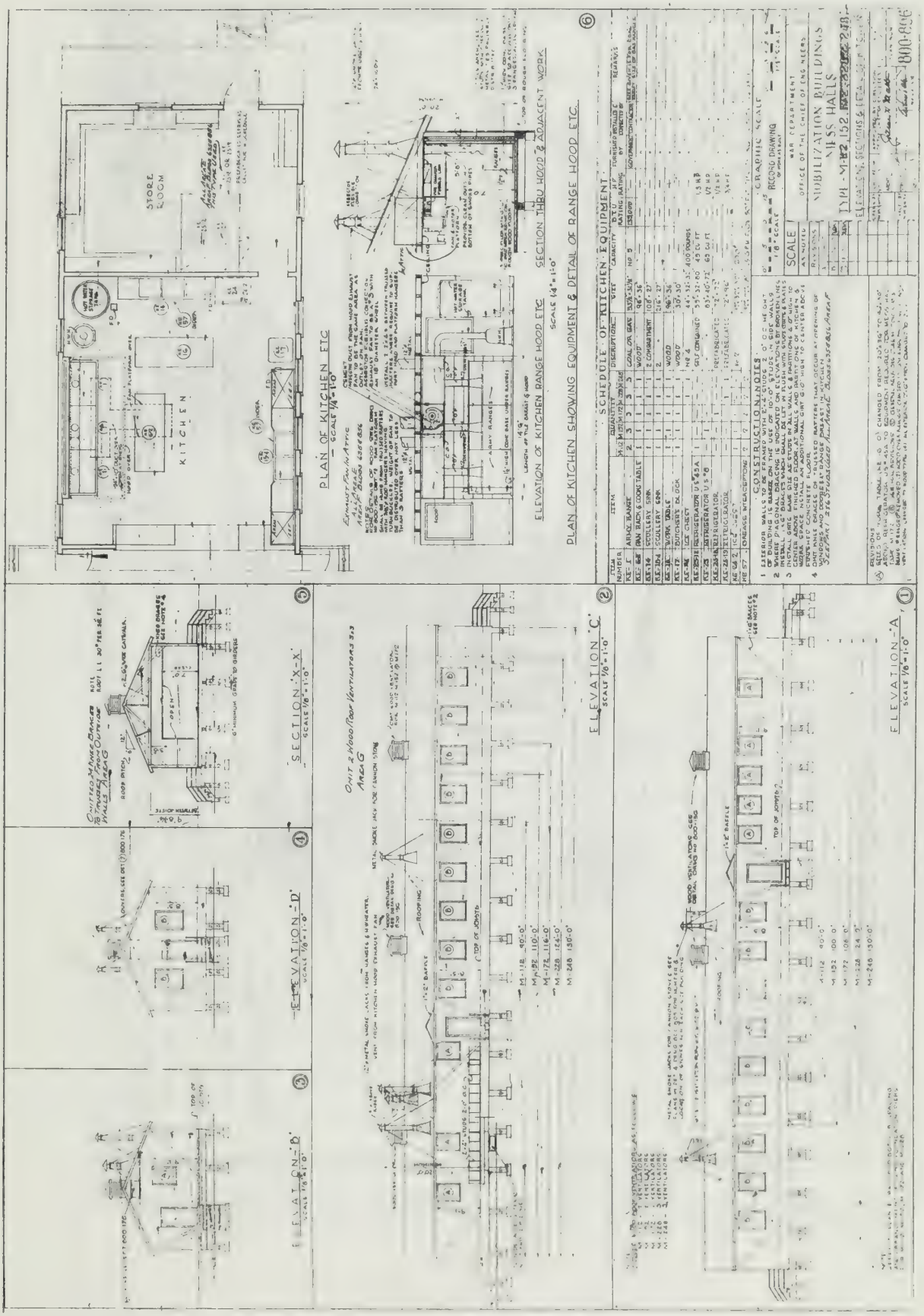

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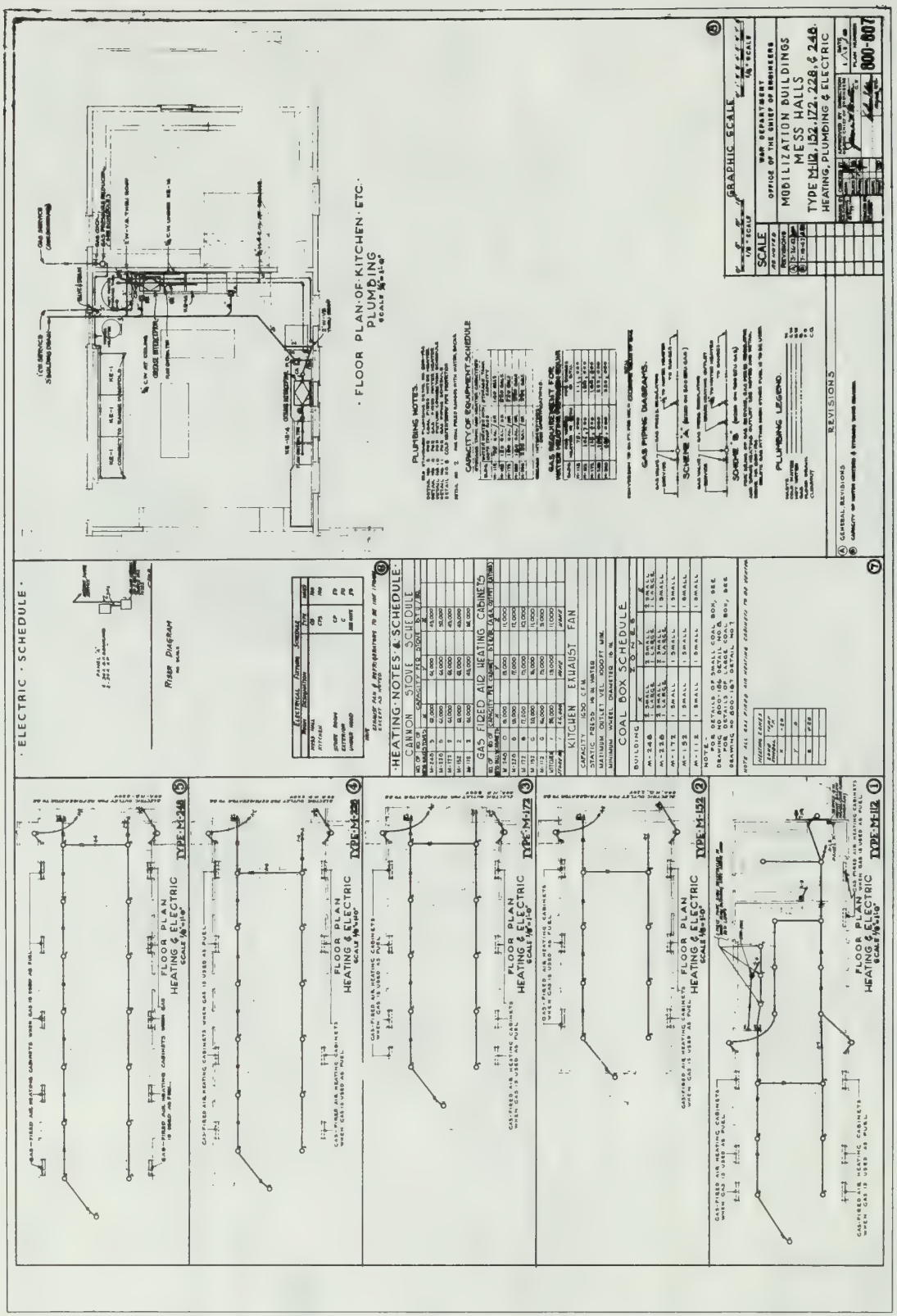

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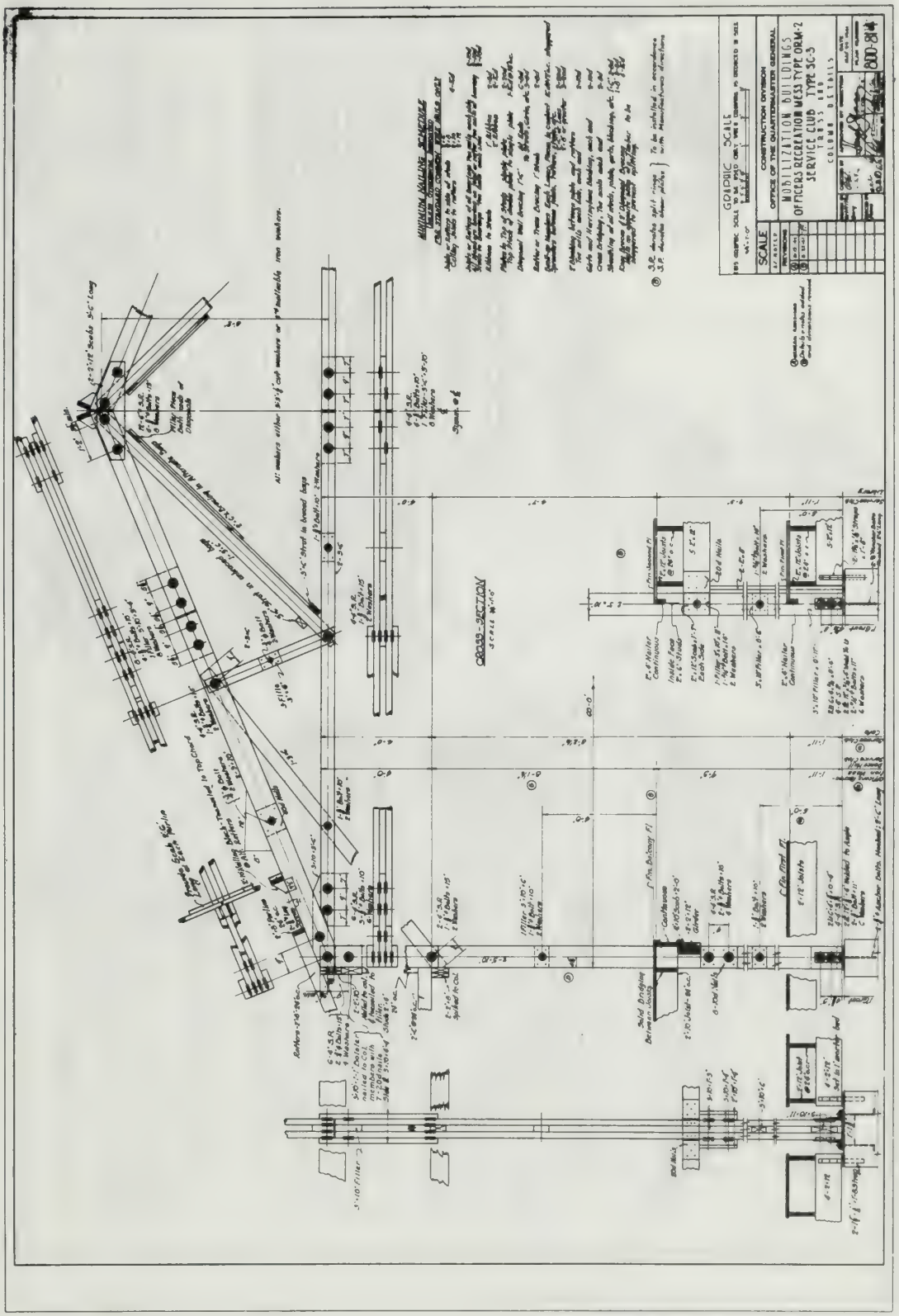

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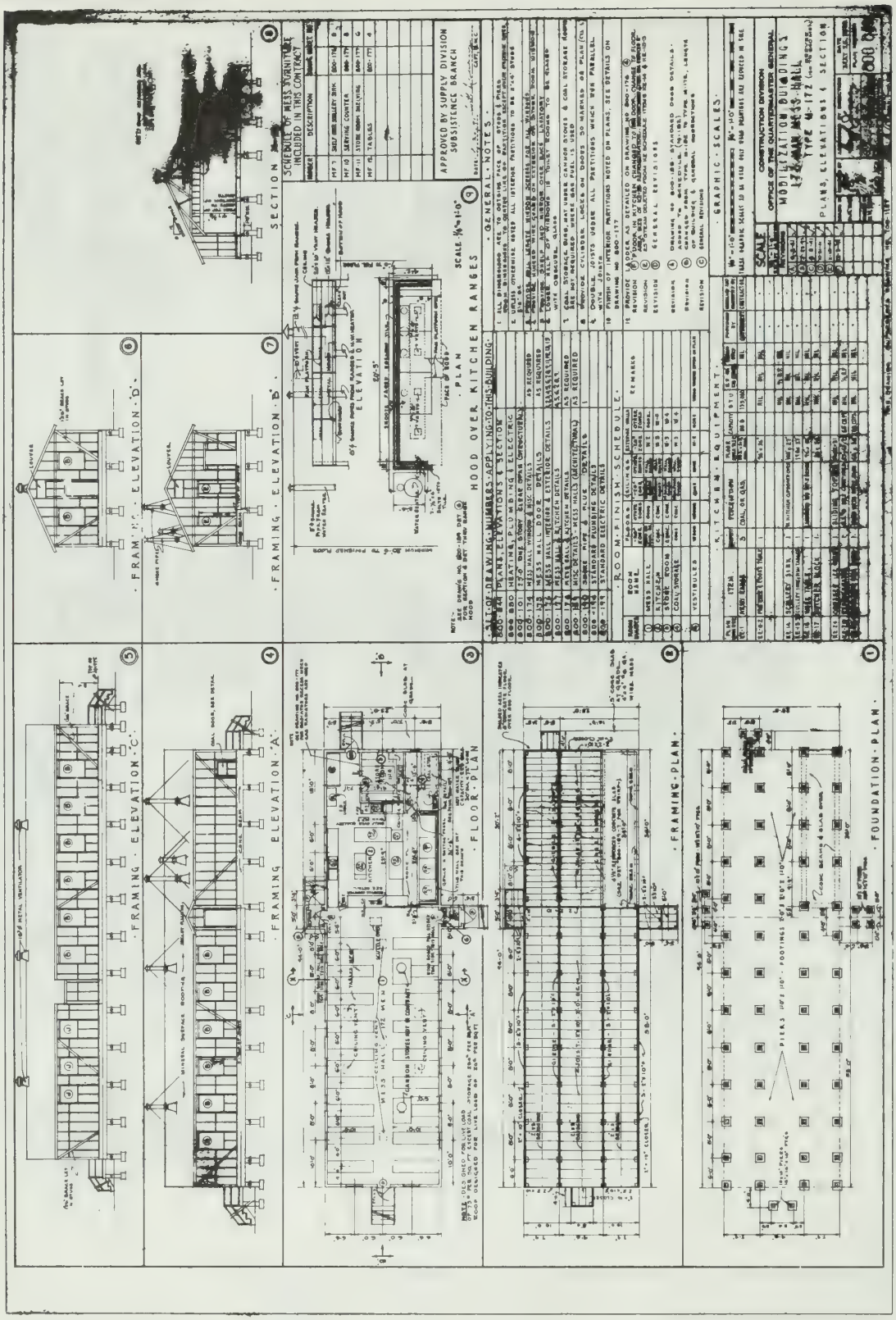
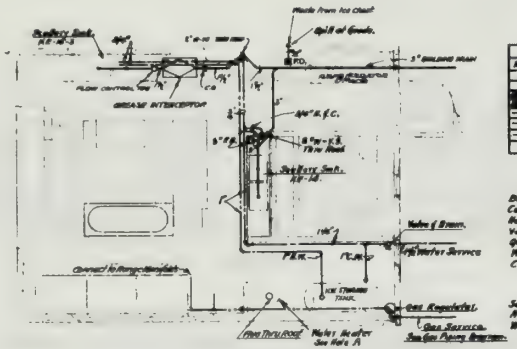




PLUMBING PLAN
Scale 1/4"=1'-0"

CONNECTIONS TO FIXTURES			
No.	FIXTURE	C.W.	H.W.

PLUMBING LEGEND

Building Drain
Cold Water — C.W.
Hot Water — H.W.
Vent — V.
Gas
W-V.S. Wash — Vent Stack. W-H Hot Wash Vent
C.P. Cas Pool. F.D. Floor Drain.
W.H. Hot Water Heater.

PLUMBING NOTE 'A'

See Plumbing Miscellaneous Detail Drawing No 800-156, Details Nos 3, for Coal Fired Water Heater, and No 4, for Gas Fired Water Heater.

CAPACITY OF EQUIPMENT

WATER HEATER
100 GALS PER HOUR MIN HEATING CAPACITY AT 100°F TEMPERATURE RISE
HOT WATER STORAGE TANK
250 GALS

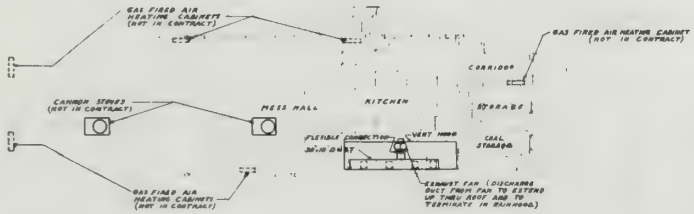
Gas Pressure Regulator Shall have a capacity of not less than:-
For Scheme 'A' 350 C. F. H
For Scheme 'B' see Schedule below

Gas Cock — Regulator — 1" D.W.H.
Gas Service. — 1" to Kitchen Equipment Only.
Scheme 'A' Gas Piping Diagram.

Gas Cock — Regulator — To Space Heater. — 1½" to Kitchen Equipment Only.
Scheme 'B' Gas Piping Diagram.
Not to Scale.

Subsidiary Gas Valves shall be provided where shown on Scheme 'A' and 'B' Gas Piping Diagrams.
Pipe Sizes based on 900 BTU Gas - Scheme 'B'
" " " 500 " " - Scheme 'A'

SCHEME 'B' GAS PIPING			
ZONE	CAPACITY CFH	Main	Zone Branch
50	175	1"	1"
100	275	1"	1"
150	375	1"	1"
200	475	1"	1"
250	575	1"	1"
300	675	1"	1"



HEATING PLAN
SCALE 1/8" = 1'0"

CANNON STOVES						
	ZONE					
	-10°F		0°F		+20°F	
No. of STOVES	FIRE POT DIAM.	BTU/HR OUTPUT	FIRE POT DIAM.	BTU/HR OUTPUT	FIRE POT DIAM.	BTU/HR OUTPUT
2	20"	61,000	20"	61,000	20"	61,000

NOTE:
WHERE GAS IS AUTHORIZED FOR USE AS FUEL, INSTALL IN LIEU OF STOVES, GAS FIRED AIR HEATING CABINETS

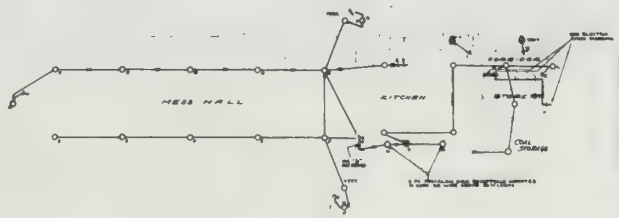
STOVES & HEATERS NOT IN CONTRACT

GAS FIRED AIR HEATING CABINETS (IF AUTHORIZED)				
	ZONE			
ROOM	No. of HEATERS	-20°F BTU/HR OUTPUT AGA RATING	0°F BTU/HR OUTPUT AGA RATING	+20°F BTU/HR OUTPUT AGA RATING
COOK ROOM	1	45,000	42,000	33,000
MESS HALL	3	34,600	30,600	25,800

EXHAUST FAN			
CAPACITY CFM	FAN WHEEL DIAM.	STATIC PRESS INS. H2O	
1800	9"	1/8	

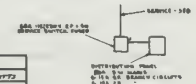
CANNON STOVES						
	ZONE					
	+10°F		+30°F		+40°F	
No. of STOVES	FIRE POT DIAM.	BTU/HR OUTPUT	FIRE POT DIAM.	BTU/HR OUTPUT	FIRE POT DIAM.	BTU/HR OUTPUT
2	20"	61,000	18"	45,000	16"	32,000

GAS FIRED AIR HEATING CABINETS (IF AUTHORIZED)				
	ZONE			
ROOM	No. of HEATERS	+10°F BTU/HR OUTPUT AGA RATING	+30°F BTU/HR OUTPUT AGA RATING	+40°F BTU/HR OUTPUT AGA RATING
COOK ROOM	1	44,000	27,000	20,000
MESS HALL	3	34,600	17,200	12,800



ELECTRICAL PLAN
SCALE 1/8"=1'0"

FIXTURE SCHEDULE		
ROOM DESIGNATION	TYPE	WATTS
MESS HALL	C3	150
KITCHEN	CR3	100
ENTRANCE	C	50
STORAGE	CP	50
COAL STORAGE	C	85
CORRIDOR	CP3	150
VESTIBULE	CP	50



ELECTRIC RISER DIAGRAM
NO SCALE

ELECTRICAL CHARACTERISTICS:
REFRIGERATOR SINGLE PHASE 60cy
1000 WATTS - 110 V

(A) CAPACITIES OF WATER HEATER & HOT WATER STORAGE TANK REVISED
REVISION (B) PIPE DIAMETER, DIAMETER FLOW, VENT DUCT
REVISION (C) GENERAL REVISIONS
REVISION (D) GENERAL REVISIONS
REVISION (E) CHANGED FROM TYPE M-172 TO TYPE M-172 (DESIGN OF BUILDING CHANGED AND GENERAL CORRECTIONS)

GRAPHIC SCALE
1/16" = 1'0" 1/4" = 1'0"

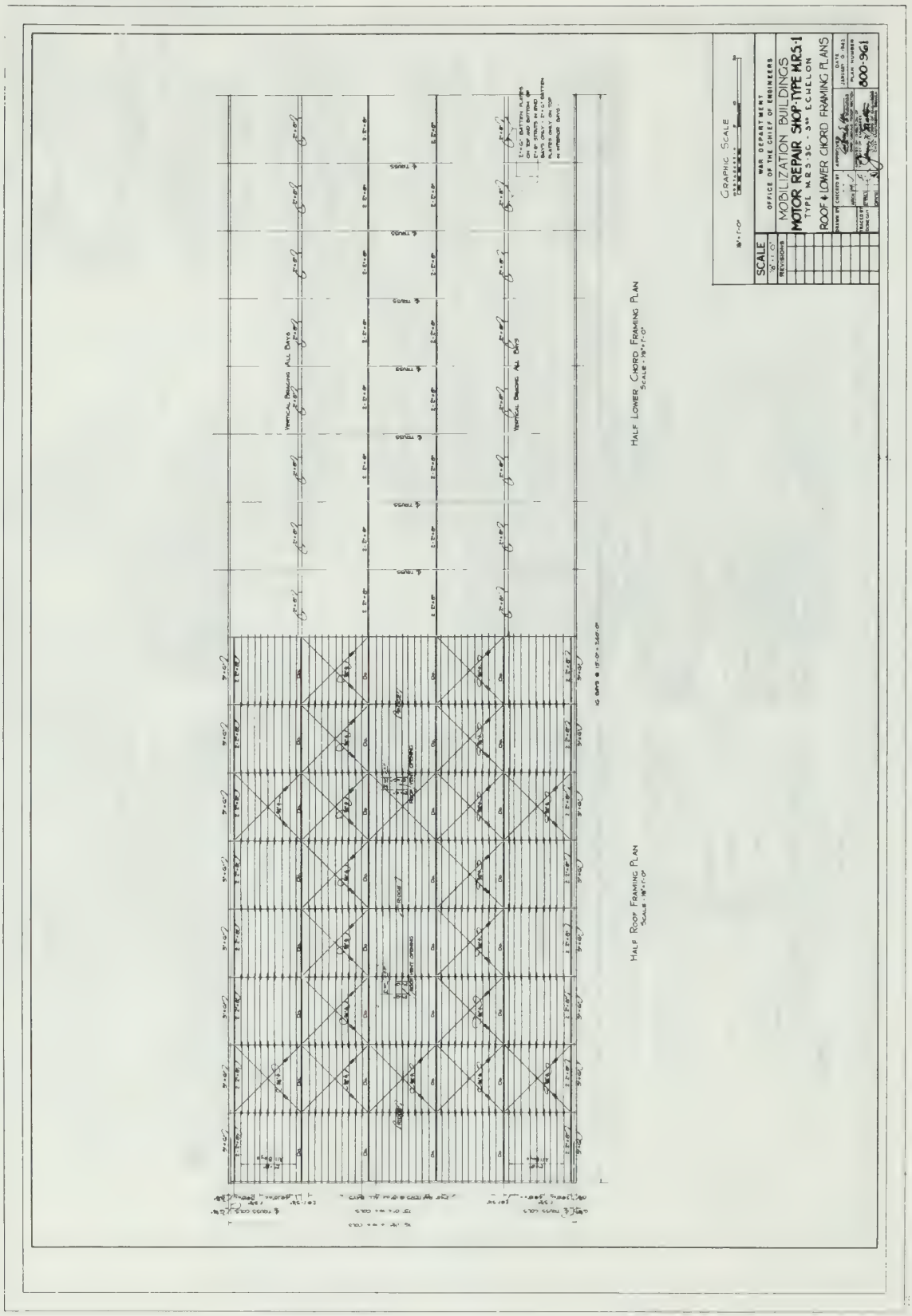
SCALE	CONSTRUCTION DIVISION
As Noted	OFFICE OF THE QUARTERMASTER GENERAL

REVISIONS
A 7-43 6-45
B 8-31-45
C 9-14-45
D 11-3-45
E 7-18-46 A.B.D.

MOBILIZATION BUILDINGS
172 MAN MESS HALL
TYPE M-172 (160 TO 200 MEN)
PLUMBING, HEATING & ELECTRICAL PLANS

DRAWN BY CDR
TRACED BY
DIRECTION
DATE MAY 16, 1941
PLAN NUMBER 800-850

Plan Number 800-961



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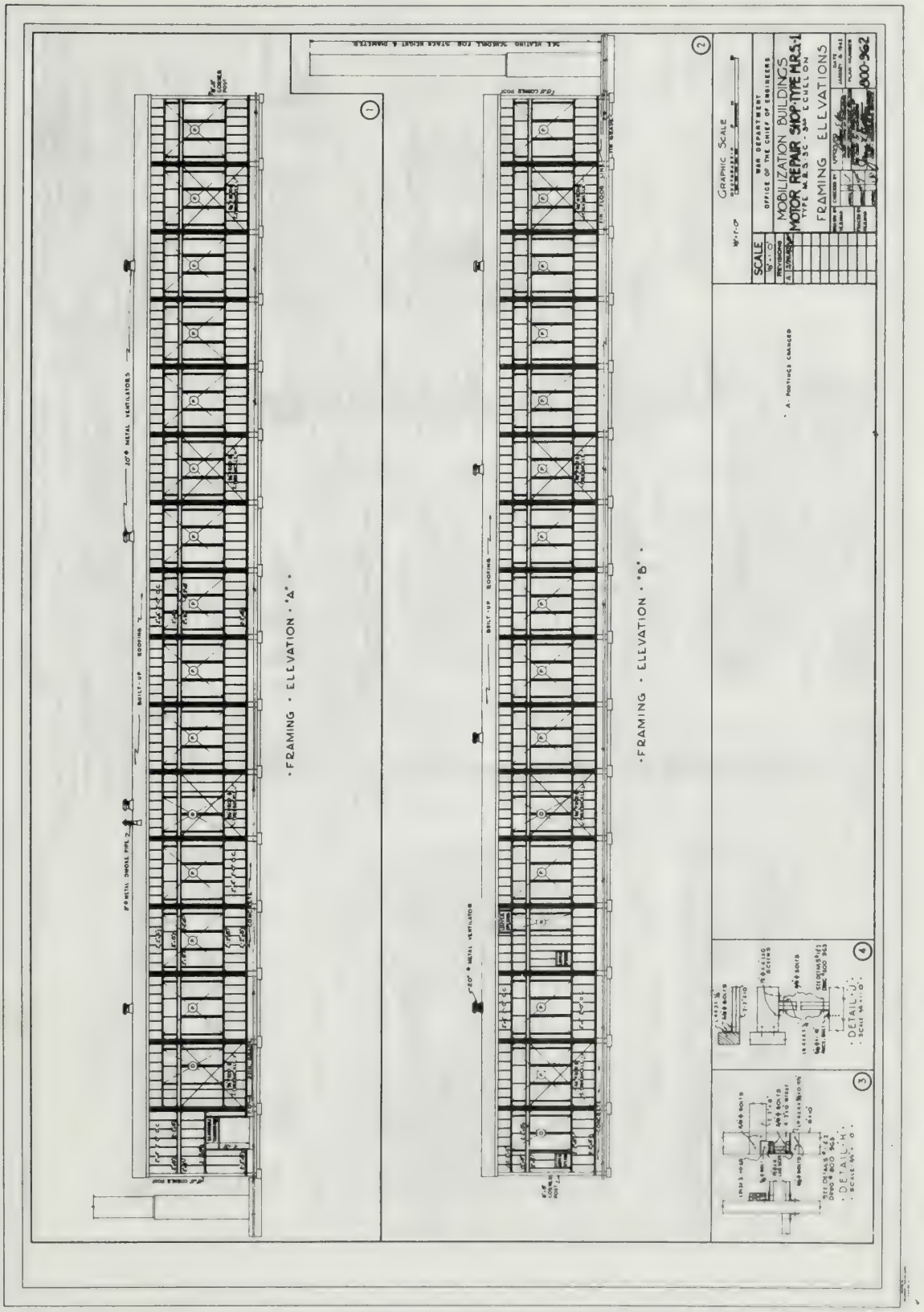

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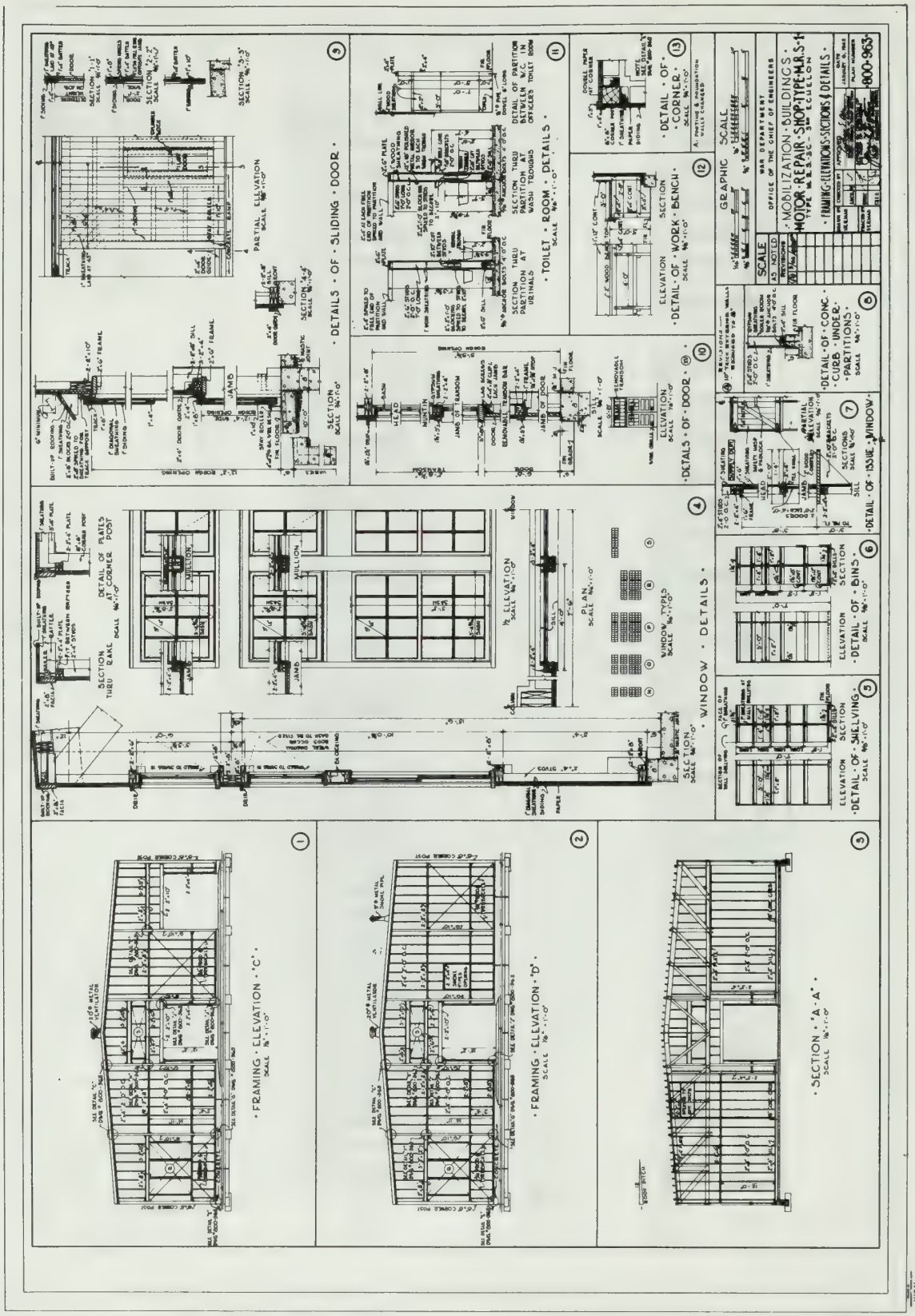

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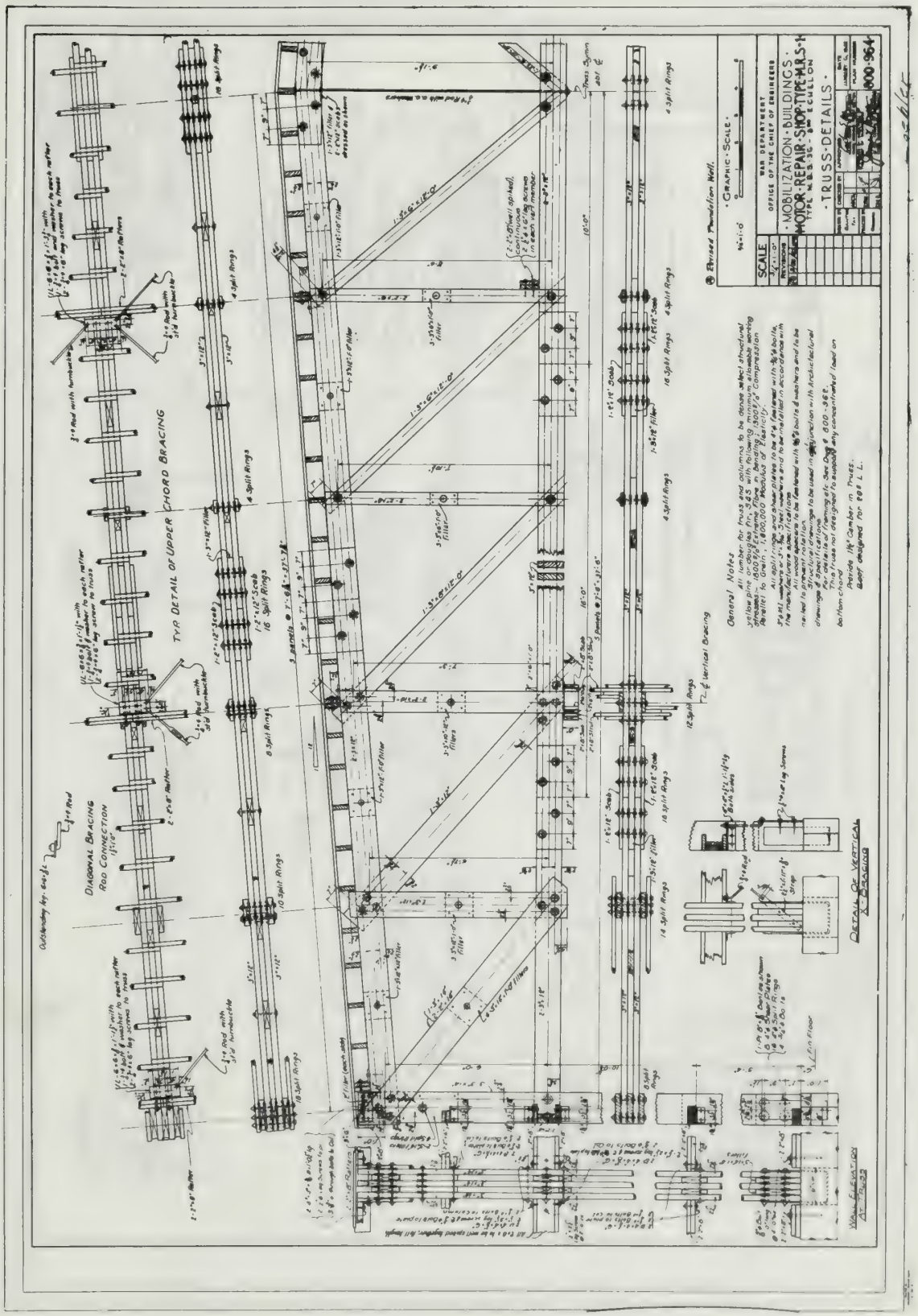

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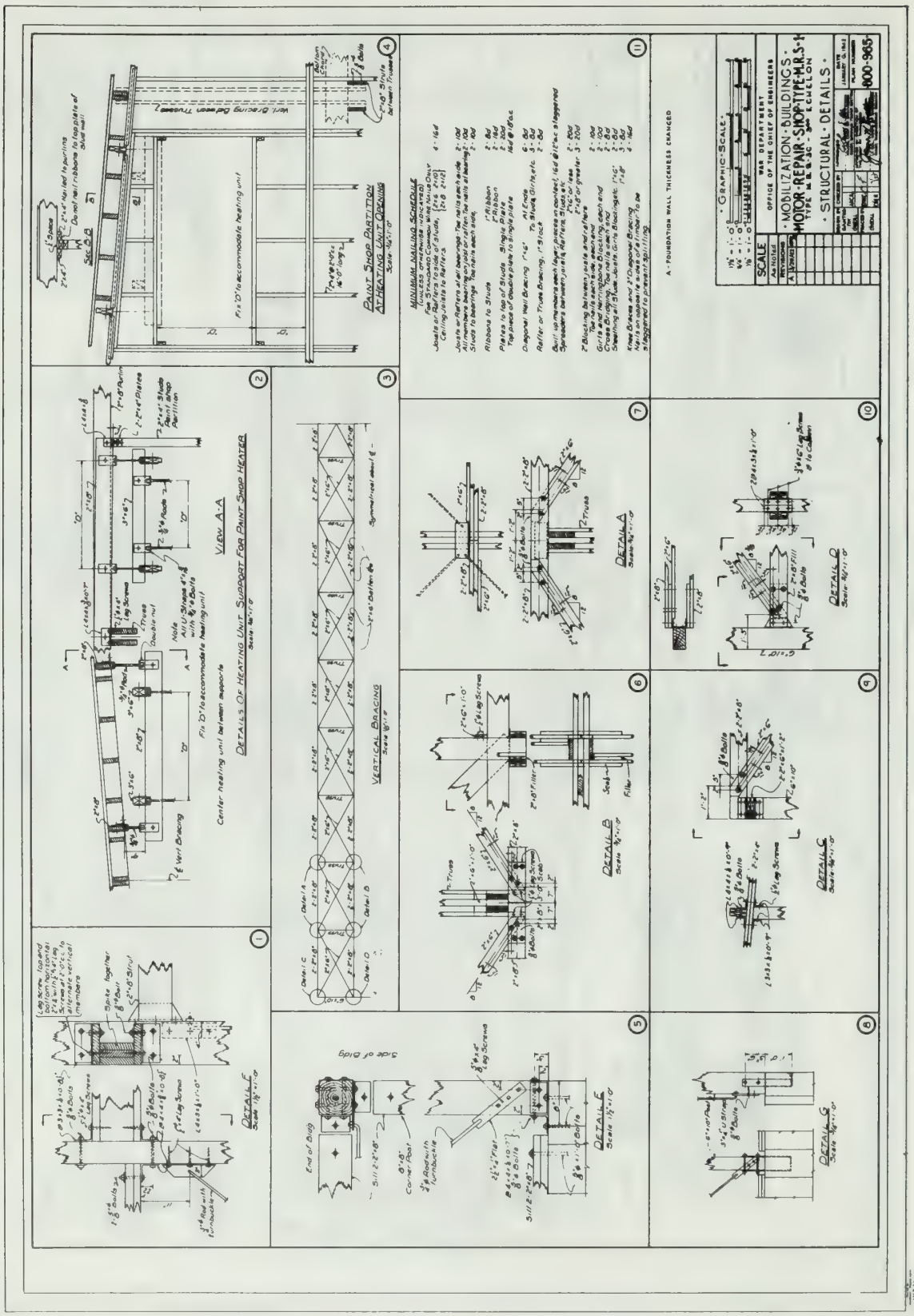

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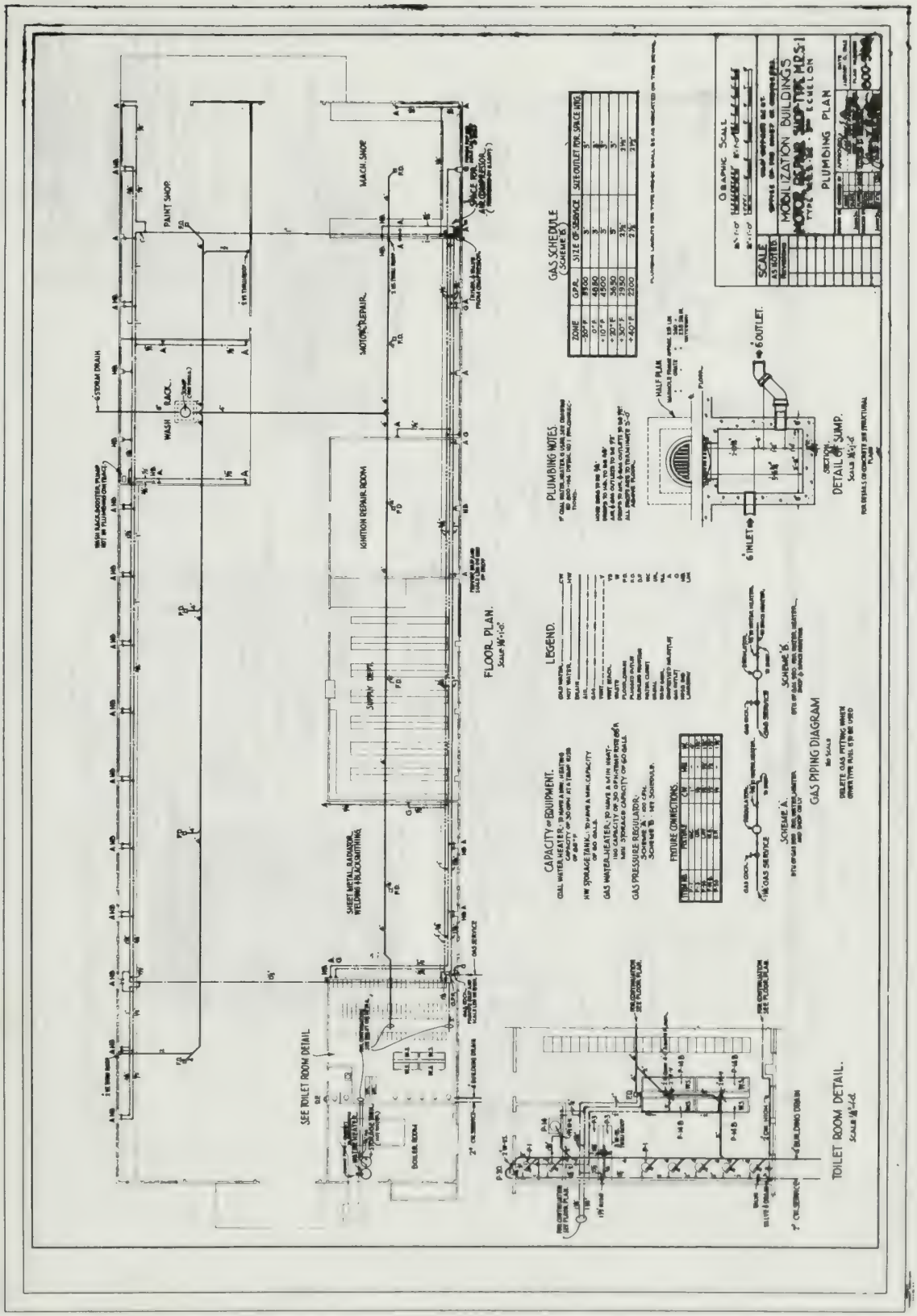

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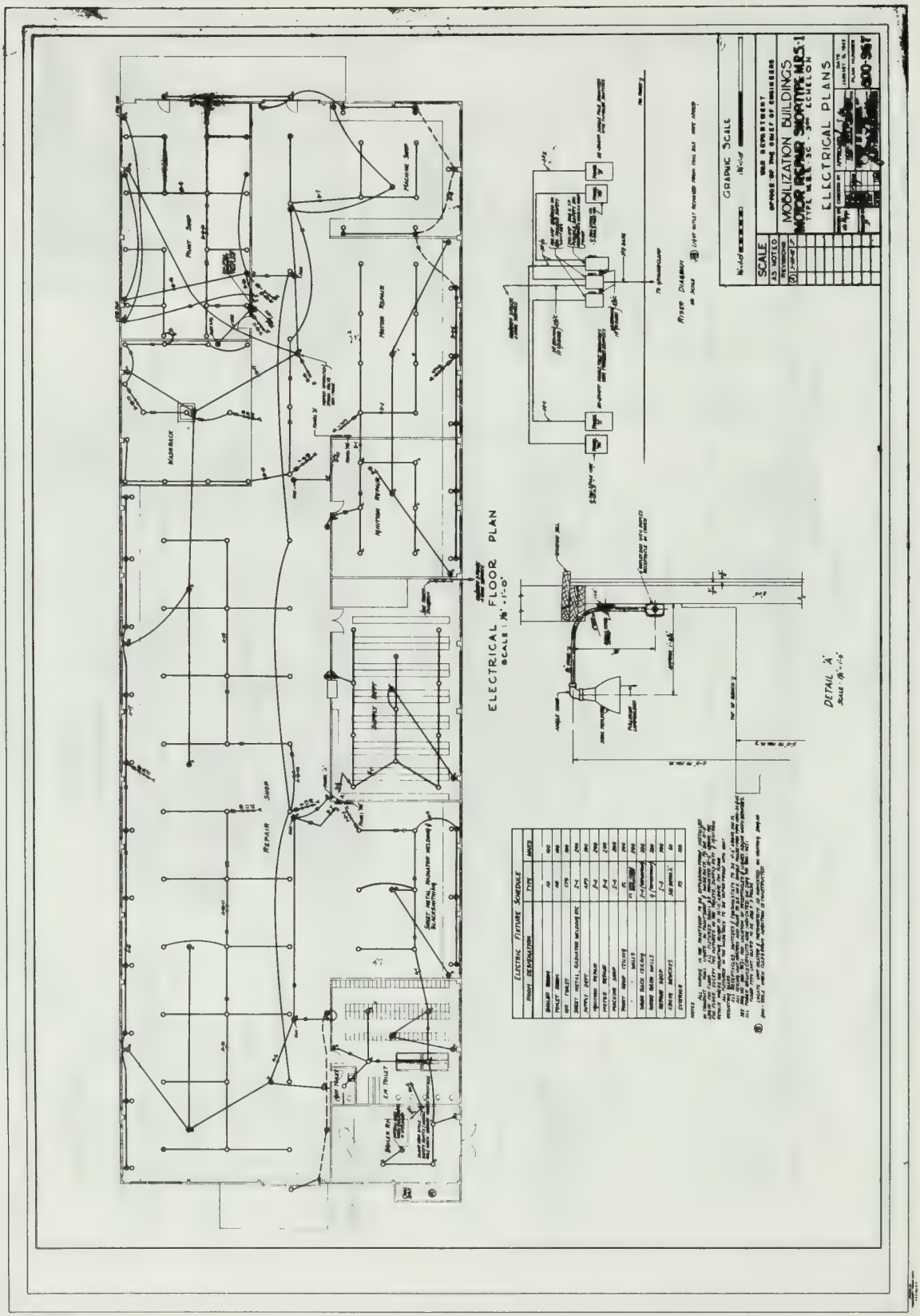

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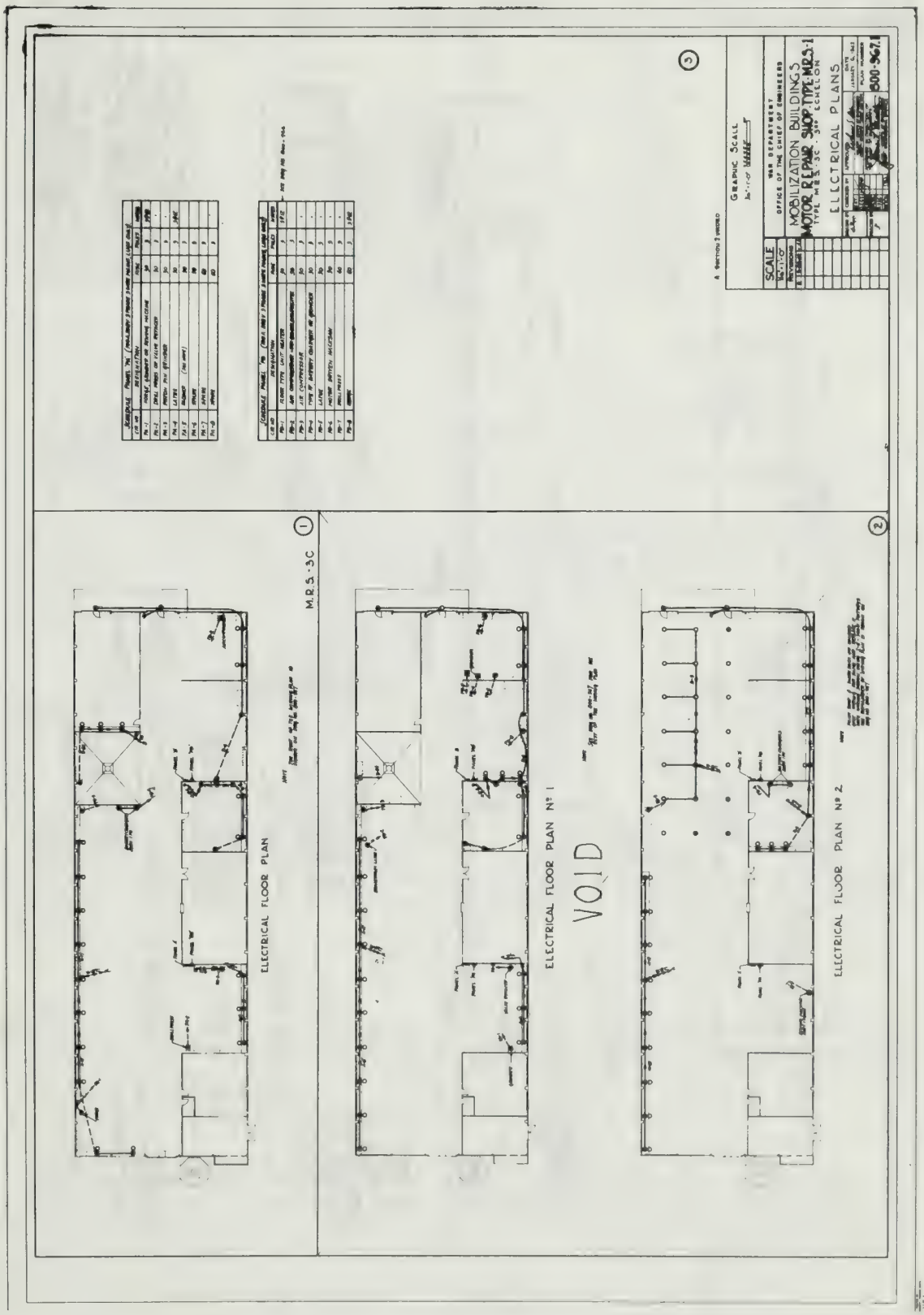

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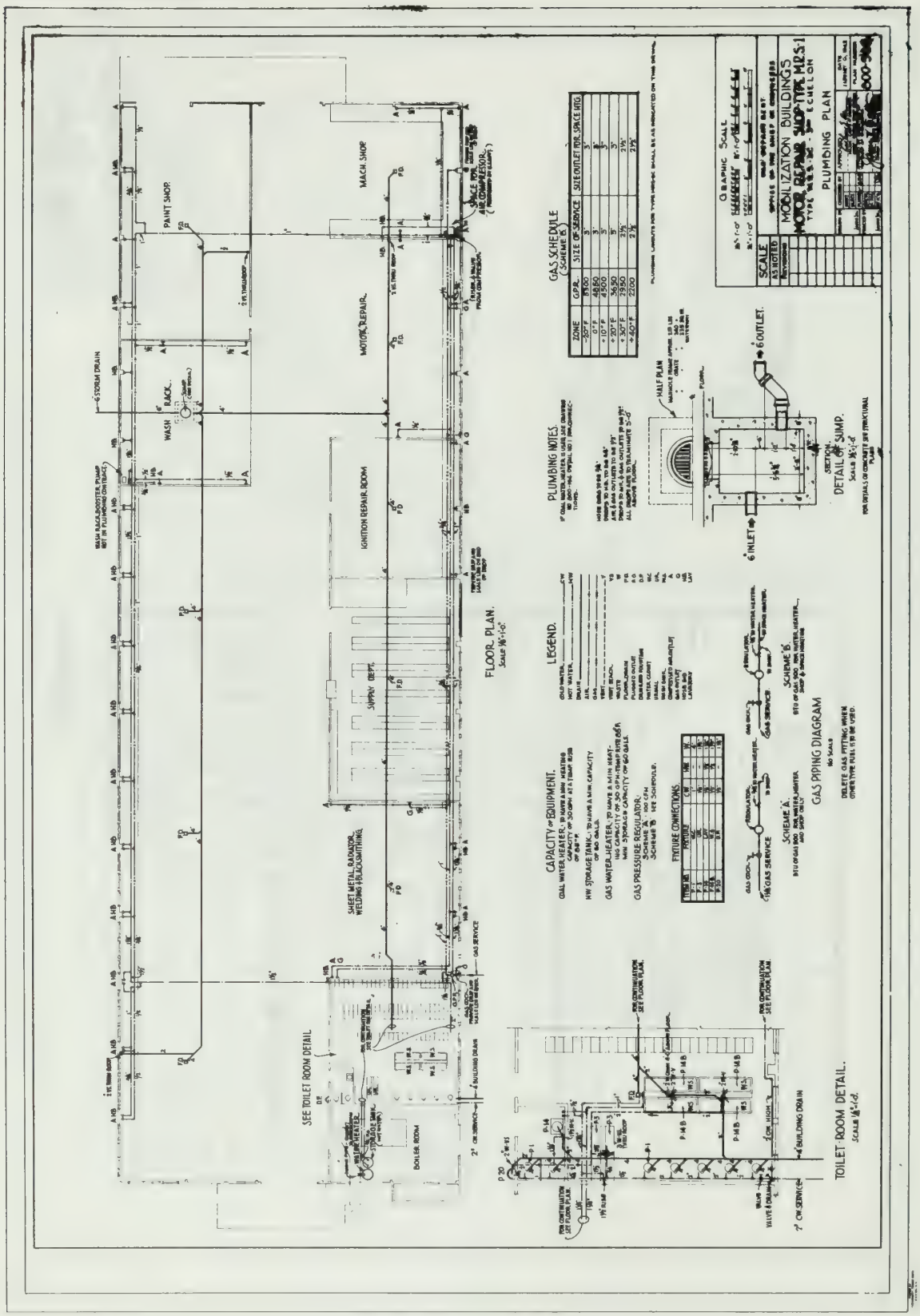
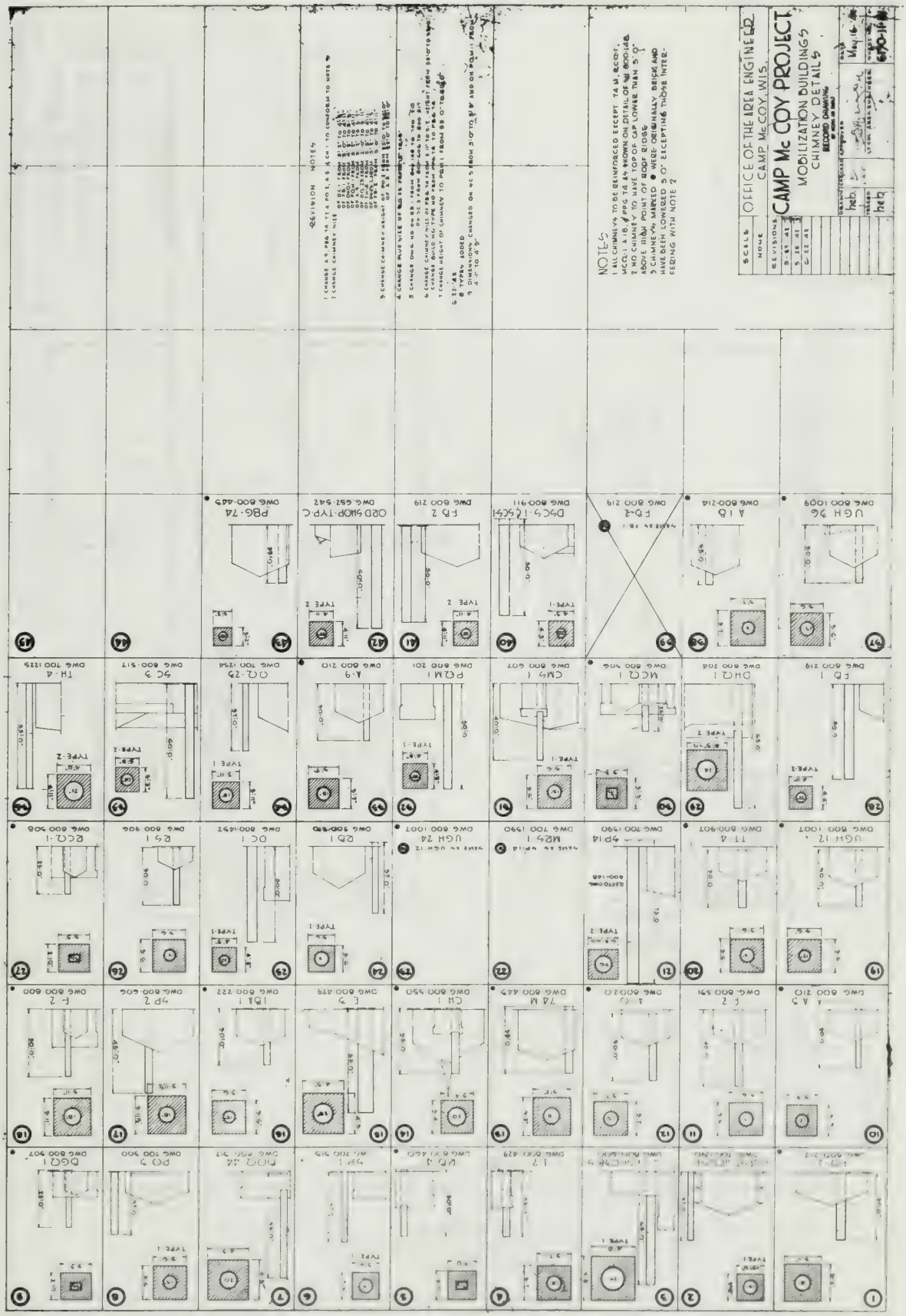
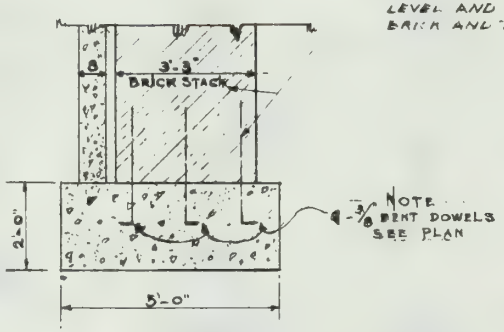


Plan Number 6150-11-B

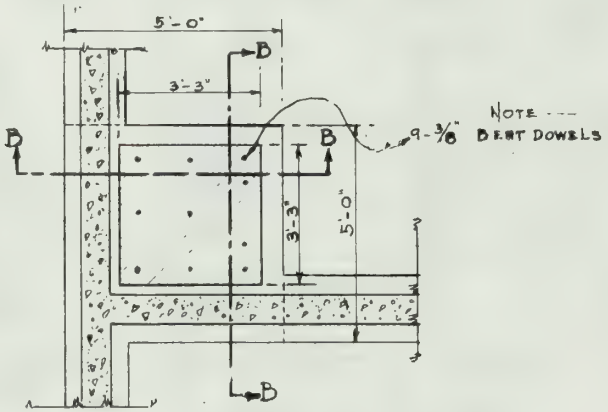


Plan Number 6150-12-B

* —IN AREA F, THE STACK IS CONCRETE TO FLOOR LEVEL AND THE REINFORCING RUNS INTO THE BRICK AND THROUGH THE CONCRETE.



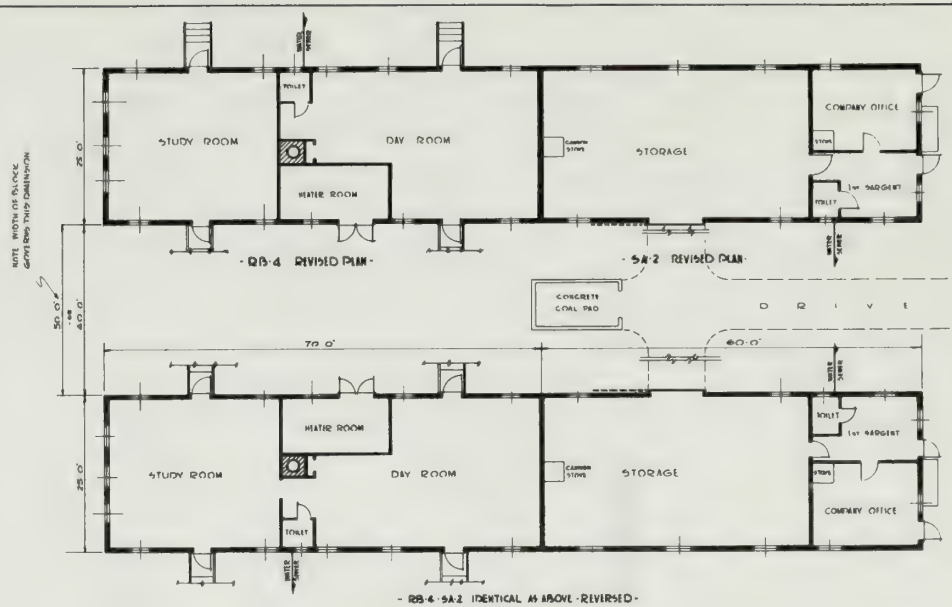
SECTION B-B
1/2" = 1'-0"

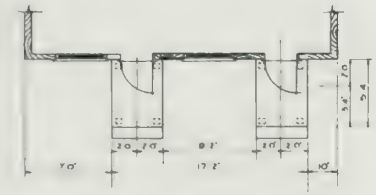


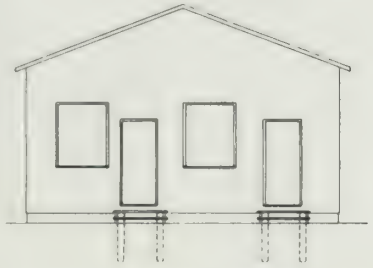
PLAN OF CHIMNEY FOOTING
1/2" = 1'-0"

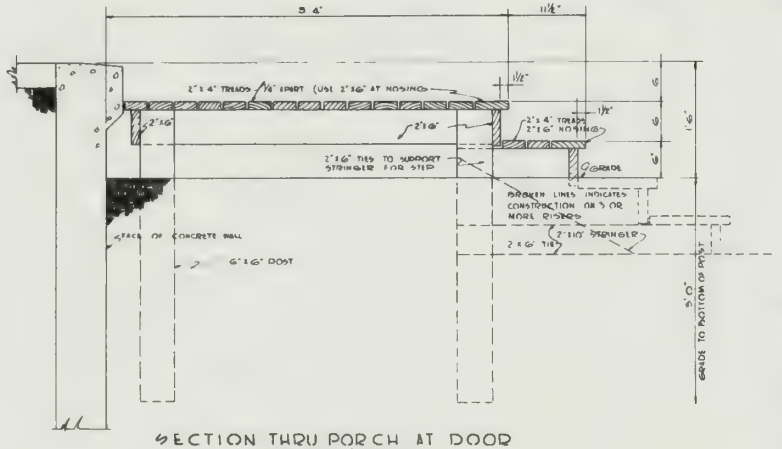
RECORD DRAWING
AS WORK AS BUILT

CHIMNEY FOOTING FOR
74 MAN BARRACKS
REVISED 4/18/42
REVISED BY AREA ENG'R PLAN NO. 6150-12
~~CONSTRUCTION DIV. PLAN 800-443~~
APPROVED —
DRAWN BY
CHECKED BY
6150-12-B









SECTION THRU PORCH AT DOOR
SCALE: 1½" = 1'-0"

NOTE THIS DWG SUPERSEDES DWG NO 6150-16 D, DATED 7-8-41 ALSO DWG NO 6150-1 B, DATED 4-17-41 AND COMBINED ON THIS DWG.
RECORD DRAWING AS BUILT

SCALE AS NOTED	OFFICE OF THE AREA ENGINEER CAMP McCOY WISCONSIN
REVISIONS	CAMP McCOY PROJECT
	RB-4 - SA-2 COMB BLDG REVISED FLOOR PLAN, ALSO PORCH DETAILS
DRAWN J.H. PESTER; TRACED J.M.O.; CHECKED	SUBMITTED L. Ray Olson Col. Corps of Engrs; APPROVED RECOMMENDED Lt. Col. Corps of Engrs; Area Engineer; DATE JAN 4 43; PLAN NUMBER 6150-38B

Plan Number 6150-38-B

APPENDIX B

CHRONOLOGY

1923 General Pershing directs Construction Services to prepare drawings for prefab wooden structures, small, one story portables that could be quickly erected and dismantled.

1928 Permission to update World War I cantonment drawings granted to Construction Services from G-4.

1929 Rough sketches of 700 Series ready for inspection by early 1929. G-4 approves but the General Staff prefers prefab idea.

1934 In spring 1934, Colonel Hartman joins Planning Branch of Construction Division, Office of the Assistant Secretary of War. Finds planning branch of Construction Division in disarray, with 700 Series drawings incomplete. Begins to revise 700 Series.

1935 In spring 1935, Hartman becomes Chief of Construction Branch. Secures $55,000 in relief money to fund design process and begin a revision of the 700 Series plans, which continues into the fall.

October General Malin Craig, Chief of Staff, orders revision of mobilization plans.

1936 In early 1936, Hartman heads a three-man committee studying the army's plans for emergency shelter. This group argues that the "makeshift" use of fairgrounds and public buildings is inadequate.

1937 Office of the Assistant Secretary of War completes draft of War Construction Plan for the Construction Division called "Annex to the Industrial Mobilization Plan." The purpose of this document is to outline the course of action in supervising the army's emergency building effort should war come. G-4's duty under this plan is to determine types and requirments for structures.

1938 As a result of General Craig's 1935 directive, the "Protective Mobilization Plan" approved. It calls for an initial force of 400,000 men increased to 1 million within eight months of M-day. The troops would be housed in existing facilities and tents only for the initial mobilization. Quickly thereafter they would be sent overseas to complete their training, as in the First World War, thereby vacating the facilities for new troops. Thus, there was resistance to undertaking a mobilization construction program.

In summer 1938, Hartman gets $63,000 from WPA & hires staff to complete 700 Series drawings. he is also able to obtain $200,000 in PWA funds to finance a design studio for engineers and draftsman at Fort Myer, Virginia.

1939

April Hartman submits layouts to Quartermaster General Arnold for approval, who rejects these construction plans for existing military posts. Arnold would not accept such structures as 2-story mobilization type barracks, inside plumbing, and hot air heat. The PMP, the army's only mobilization plan, envisioned little building.

September Germany invades Poland and the Second World War begins in Europe.

President Roosevelt issues Executive Order No. 8244 proclaiming a Limited National Emergency. Among other measures, the order expands the army from 210,000 to 227,000 troops and orders a 100,000 man increase in the National Guard.

1940

March Following inquiry, General Marshall is informed that 2,000,000 men could be housed within 6 months of go-ahead order for mobilization construction.

Hartman checks 700 Series plans and discovers a few drawings altered and the rest destroyed. Dismayed, he gathers a groups of draftsmen and hurriedly begins to redraw the plans at the Ft. Myers studio.

April Construction Advisory Committee formed under the Army-Navy munitions board, drawing from private sector consultants.

April-June The end of the "Phony War." The sudden German conquest of continental Europe stuns the War Department and precipitates American mobilization for war.

May Roosevelt asks Congress for an additional $732 million in defense appropriations to cover munitions manufacturing and expansion of the army to 280,000 men. Approved on june 13, the bill earmarks $122 million for construction.

Roosevelt goes back to Congress for another defense appropriation, this one over a billion dollars. The "First Supplemental National Defense Appropriation Act for (fiscal year) 1941" raises army strength again, to 375,000 men, and makes an additional $84 million available for construction.

June 700 Series recreated, and 300 building types approved by War Department. The basic barracks included central heating, plumbing inside the buildngs rather than in a separate location, concrete foundations, termite shields, and aqua medias.

First "War Department Construction Policy" Directive. This order lays down several principles. First, it directs that the camps would go up in company blocks, consisting of two, 63 man barracks, a mess hall and an administration building. Second, it suspended all permanent construction at all army posts in favor of temporary building.

The "munitions program" contemplates a mobilization force of 4 million men by spring 1942.

August The War Department revises the june 15 directive, adding an order that charges the bulk of army housing construction to the Quartermaster Corps, and prohibiting individual Constructing Quartermasters from deviating from the standard plans.

Congress approves legislation federalizing the National Guard. by September 9, it appropriates $128 million with which to house thes new men. The QMC is expected to provide housing for them by October 10.

The Quartermaster Corps begins barracks construction program for what military planners envision will be an army of 400,000. Prior to receiving Congressional funding for this construction, the QMC borrows from the President's emergency "blank check fund."

September Selective Service Act passes Congress and is signed by President Roosevelt. In an important amendment, the bill places important restrictions on the army's ability to draft men, specifying that no soldier could be drafted until the government had provided ". . . such shelter, sanitary facilities, water supplies, heating and lighting arrangements. . . as may be determined . . . to be essential to public and personal health."

The "Third Supplemental defense Appropriations Bill" signed by the President. It includes $10 million for sheltering the draftees. Construction of the facilities is to be completed by June 1941.

Holabird & Root review the 700 Series and suggest alternative materials to wood.

October Planning block changed to 217 man battalions in 4 barrack units.

The Advisory Commission of the Construction Division calculates that housing facilities for 700,000 men would be needed as of February, 1941, with facilities need for 400,000 more troops who would be arriving by June.

November Directive issued from G-4 to paint exteriors of mobiliziation structures. This is done for purposes of soldier morale and wood preservation.

December Construction of all facilities for the Air Corps transferred from the QMC to the Corps of Engineers (COE). The COE turns to the 700 Series plans.

Somervell replaces Hartman as Chief of Construction Division, QMC. He employs a much more decentralized structure, turning over much on-site power to the Constructing Quartermaster and making Zone Constructing Quartermasters the "Backbone" of his organization. Somervell advocates long range, cooperative planning in developing sites and plans. Moreover, in the reorganization, G-3 is responsible for site selection, and G-4 determines construction.

1941 In winter, Somervell brings in a new team of advisors, among them George Bergstrom of the American Institute of Architects. In addition, he "borrows" several officers from the COE, including Major Hugh Casey, a widely regarded young engineer. Casey and Bergstrom will be central in the development of the 800 Series.

January Maj. Casey becomes Chief of Engineering Division. Bergstrom is key advisor on architectural matters.

Engineering Branch of the Construction Divison engages in a thorough review of the 700 Series, though these appear to be programmic rather than plan changes.

Series 700 configuration changed from 63 to 74 man barracks. (This is according to Fine and Remington, p.350; other historians place the date on August 1, 1941, after a lengthy period in planning.)

Construction quartermaster tests prefabs at Camp Polk.

January-February Construction Division begins to stockpile lumber for future and rapidly approaching increases in construction.

Somervell institutes a general tightening of control over construction, sparked in part by sloppy construction found at some sites. As a response, he orders Constructing Quartermasters to supervise contractors more closely to ensure adherence to specifications. The situation is exacerbated by continual on-site revisions to plans.

February Roosevelt askes for additional funds to complete cantonment project.

February-March Casey & Staff revise 700 Series in changes which both strengthen and weaken the durability of the structures. On one hand, they add heavy timbers and more durable roofing materials. On the other hand, they eliminate aqua medias and termite shields in order to save costs.

Casey explores us of alternate materials, and advocates converting tent camps to hutments since canvas is in short supply.

March QMC abandons negotiated fee contract for a modified competitive bidding system based on records on file.

The "Fourth Supplementary Defense Appropriation Act" makes available $15 million to the QMC to finance engineering studies, intended to correct for earlier errors in site selection. Moreover, the AMC continues to stockpile materials.

In spring, Casey, Bergstrom and the Design Section create and complete whole new building series, the 800 series. These structures are more spacious, sturdier, and more elaborate, and are oriented towards a 74-man capacity more suitable for the 81 companies of the triangular division. The series will not be implemented until the next expansion of the army, in the new camps approved and planned in the summer and fall of 1941.

April In the continuing struggle with field officers anxious to deviate from the standard plans, Somervell persuades G-4 to lift the "freeze order" on such deviation. This enables Constructing Quartermasters to substitue other

materials for wood in the previously all-wooden buildings.

May Gen. Schley, Chief of Engineers, asks field engineer offices to report problems they had experienced with 700 Series in air corps construction. The volume of their replies results in yet another revision of the 700 series.

Secretary of War approves sites for nine new cantonments.

The Adjutant General issues a directive to Corps Area Commanders to investigate areas for 14 additional triangular division camp sites and submit reports at the earliest possible date.

June Though Somervell is mistaken when he estimates that the construction program is complete, by late June he QMZ had made some impressive accomplishments. Fueled by $1,500,000,000 spent over the fiscal year, the QMC had built 332 troop housing projects and completed 50 camps/cantonments. Altogether, the QMC had completed a construction program to house almost a million men in little over ten months.

July Fixed-fee contract system initiated.

The Chief of Staff approves sites for 14 additional triangular and armored division camps.

800 Series drawings begin to be gradually approved by G-4, issued by QMG, and sent out to be used in the field, particularly in the new camps presently in planning stages.

August Reybold replaces Schley as Chief of Engineers.

Drafting of Congressional resolution transferring all construction activity from the QMC to the COE.

September The "Victory Program" envisions an ultimate force of nearly 9 million soldiers.

October War Department issues its "Handbook of War Department Construction Policy" and Standardized Housing Schedules. This remained in effect until April, 1942, when after the transfer, the OCE issued its own revised copy on the subject.

November Roosevelt asks for $435,000,000 for expanded cantonment program. Twnety-five new cantonments planned.

Bill transferred from Chief of Construction Division to Assistant Chief of Staff.

Somervell transferred from Chief of Construction Division to Assistant Chief of Staff.

December Roosevelt signs transfer bill shifting responsibility for army construction from QMC to Corps of Engineers on Dec. 14.

Japanese attack U.S. Navy at Pearl Harbor, triggering U.S. entry into World War II.

1942 In early 1942, COE receives funding to convert tent camps to hutments.

January A "Training and Mobilization Plan" submitted by G-3 sets the total troop strength of the army at 3,317,000 soldiers.

Somervell estimates that a 3 million man army would require "at least 21 new camps of 35,000 (soldiers) each."

"War Production Board" established to administer and oversee Roosevelt's "all-out" program for war.

The continuing construction program had completed housing available for 1,700,000 men. Construction for 500,000 more is underway.

Mounting material shortages and scarcities begin to affect the troop housing program. Army commanders begin to argue that the 800 Series is too expensive and permanent. In his effort to house the continuing influx of draftees, Somervell is forced to compromise. Five new cantonments will be built with 800 Series; thereafter new camps and cantonment expansion will be in Theater-of-Operations type.

To ease a growing shortage of canvas, the Quartermaster General urges the conversion of all tent camps to hutments. With Japanese advances in southeast Asia and frequent Axis sinking of U.S. ships, many materials critical in the construction program are growing scarce. These include steel, rubber, tin, aluminum, nickel, chromium, copper, zinc, lead, iron and hemp.

Air Corps uses some prefab construction of CCC type.

February War Department issues Circular Letters requiring Theater-of-Operations type housing. Because of the materials shortages, the War department orders that henceforth the building at new stations, except where advance planning had already been completed, would be Theater-of-Operations (T.O.) construction. (Though this order excepts few types of buildings, chapels and hospitals among them.) T.O. buildings consisted of 15 lb. felt with wood lathing on wall sheathing and eliminated interior finishes.

March OCE issues War Department Construction Policy and Standardized Schedule manual.

April A mounting lumber shortage forces the COE to revise series specifications and turn to random lengths. Still, the engineers insist on timber framing, though allowing some substitutions, like concrete floors in T.O. buildings instead of wood flooring.

War Department order compelling T.O. construction in the Zone of the Interior: "Modified Theater of Operations type construction will be used for all new camps."

May Materials shortages cause military housing construction to be placed low on the list of most urgent programs.

The War Department's Directive for War Time Construction, signed by the Secretary of War, orders that "all construction to be of the cheapest, temporary character."

June Army's authorized construction program amounts to $7.5 billion worth of construction, of which $1.4 billion went for camps to train troops.

The army's $7.5 billion construction program is 95% complete.

July (to June 1943) $1.3 billion spent on new plants, most of this Atom bomb construction and facilities for large bomber.s

August Materials shortages move Army commanders to turn to double-bunking, in spite of warnings of increased respitory diseases among the troops. By September, space allowance per man had been cut to 40 sq. feet at staging areas. By the beginning of 1943, double-bunking was the policy at nearly all army installation, increasing army housing capacity nearly 50 percent.

Creation of the Women's Army Auxiliary Corps and Directive for WAAC Housing. Housing and facilities are ordered for 29 locations, all of them to be completed by May, 1943.

1943

December War Department issues "Memorandum for the Chief of Engineers: Reduction of Construction Activities." This directive permits maintenance but no new construction (in marked constrast to earlier orders to only build and defer maintenance). By this point, most troops now overseas and camps in the Zone of the Interior are emptying.

1944

March Commanding General, Army Service Forces, orders drastic curtailment of "all construction" except for specified exceptions.

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WORLD WAR II AND THE U.S. ARMY MOBILIZATION PROGRAM:

A History of 700 and 800 Series Cantonment Construction

including

Historic American Buildings Survey
Mitigation Documentation

for

Camp Edwards, Massachusetts
Fort McCoy, Wisconsin

Legacy Resources Management Program
United States Department of Defense
* * *
United States Department of the Interior
National Park Service
Historic American Buildings Survey/
Historic American Engineering Record